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CANADIAN GEOGRAPHICAL JOURNAL

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THE CANADIAN GEOGRAPHICAL SOCIETY

OTTAWA, CANADA



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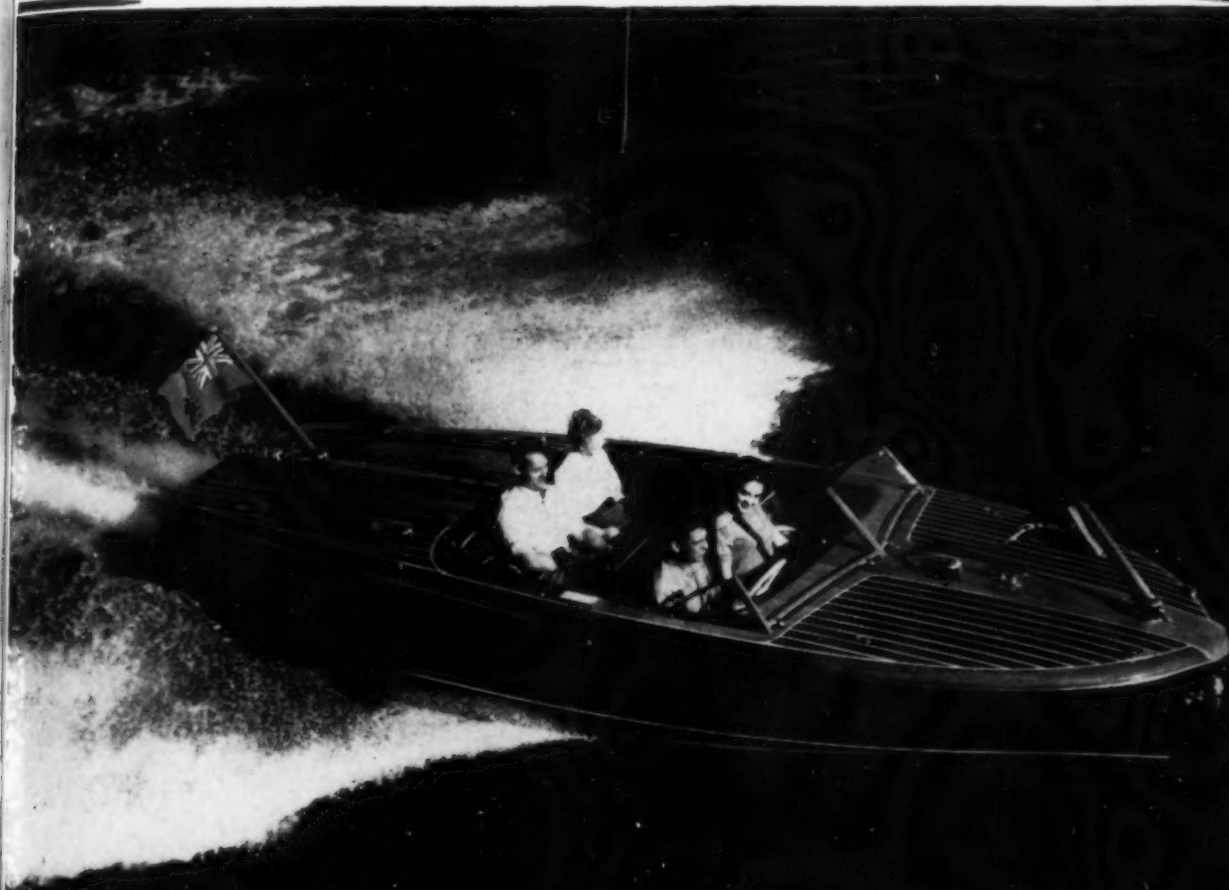
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popular in character, easily read, well illustrated and educational to the young, as well as informative to the adult.

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Vista of British Columbia

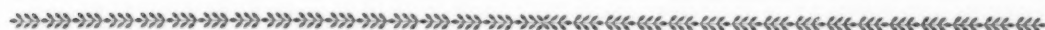
Photo by G. M. Dallyn

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The articles in this Journal are indexed in the *Reader's Guide to Periodical Literature* and the *Canadian Periodical Index* which may be found in any public library.

The British standard of spelling is adopted substantially as used by the Dominion Government and taught in most Canadian schools, the precise authority being the Oxford Dictionary as edited in 1936.

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(For descriptive title see Editor's Note-Book—page VI.)

From kodachrome by G. M. Dallyn

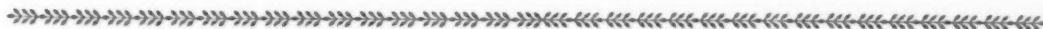
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THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA



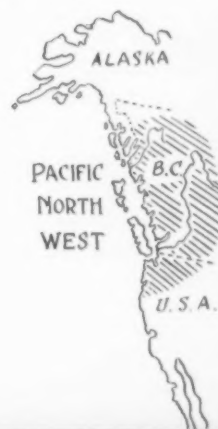
British Columbia

by JOHN GOUGH

HISTORY

BRITISH COLUMBIA can modestly claim to rank as one of Canada's most scenic and most productive provinces. Well does it merit such descriptive titles as "The Sunset Province", "The Pacific Province", and "The Switzerland of America". The very name British Columbia is suggestive of the final outcome of the struggle between Britain, America, Russia and Spain for possession of this rich wonderland of the Pacific Northwest. The provincial coat of arms appropriately depicts the rays of the setting sun casting a golden glow over the azure blue of the Pacific while the wapiti of Vancouver Island and the big-horn sheep of the mainland support a shield and imperial crown to symbolize the union of the colonies of Vancouver Island and Mainland consummated in 1866.

The name of the province was suggested by Queen Victoria of Great Britain in 1858, when she wrote to Sir Edward Bulwer Lytton, Secretary of State for the Colonies, as follows: "If the name of New Caledonia is objected to as being already borne by another colony or island claimed by the French, it may be better to give the new colony west of the Rocky Mountains another name. New Hanover, New Cornwall and New Georgia appear from the maps to be names of subdivisions of that country, but do not appear on all maps. The only name which is given to the whole territory on every map the Queen has consulted is 'Columbia', but as there exists also a Columbia in South America, and the cit-



At top:—Parliament Buildings, Victoria Photo by G. M. Dallyn



Nootka, on the west coast of Vancouver Island

B.C. Travel Bureau photo

izens of the United States call their country also Columbia, at least in poetry, 'British Columbia' might be, in the Queen's opinion, the best name."

British Columbia's colourful history revolves chiefly around the efforts of the explorers and fur traders of the four rival nations seeking to control the Pacific Northwest. This conflict dates from the sixteenth century when Spanish conquistadores sailed north along the California and Oregon shoreline. Great Britain emerged victor from a struggle lasting 250 years. She had strengthened her claims for possession of what is now Canada's most western province by the Nootka Convention of 1790 which terminated Spanish activity in this area; by the Anglo-Russian Convention of 1825 that established the boundary of Russian America in Alaska; and by the Oregon Treaty of 1846 that established the present southern boundary of British Columbia.

Numerous place names along the southern shores of British Columbia bear testimony to the activity of Spanish captains. Perhaps the Greek Captain Juan de Fuca, sailing in the employ of Spain, did sight the strait at the south end of Vancouver Island, named in his honour by Captain Barkley in 1786-7. However, no authentic records can be found

of Spanish explorations in this area prior to those of Perez, Heceta and Quadra in 1774 and 1775. These courageous captains had come more than half-way around the globe in the interests of Spain who saw her long established prestige in the western ocean threatened by Russians on the Alaska Peninsula and the gradually expanding power of Britain on the seas.

British maritime exploration in the Pacific Northwest began with Captain James Cook who journeyed northwards from New Zealand and the Hawaiian Islands in 1778 looking for the mythical "North West Passage". After discovering Cape Flattery, but failing to note the Strait of Juan de Fuca, he guided his tiny vessels, the *Resolution* and the *Discovery* along the rugged west shoreline of Vancouver Island to enter Nootka Sound. Here the Indians flocked around the strange vessels of the whitemen in cedar dugouts to exchange tanned skins of bear, wolf, fox and deer for knives, nails and buttons. They brought lustrous ceremonial robes of sea otter skins and told Cook of the many sea otters living on islands off the Kamchatka Peninsula far to the north.

Captain Cook followed the irregular coast to the Alaska Peninsula and into Bering Strait, satisfying himself that there was no

passageway through the continent to Hudson Bay. Then he sailed southwards to the Sandwich Islands where he met his death at the hands of natives. A year later his ship returned to the Pacific Northwest to load furs that sold at fabulous prices in China. Thus was laid the foundation for the profitable trade in furs that was to stimulate the exploration and settlement of what is now British Columbia.

The year 1787 found Captain John Meares of England casting anchor at Nootka on his second visit to this area. Obtaining some land from Chief Maquinna for about 10 sheets of copper, Meares built a trading post and began the construction of the little 30-ton schooner the *North West America*. Four days after the launching of this first ship built on the Pacific coast of North America, Meares sailed for China in charge of another vessel bearing furs and spars. It was there that he learned that the Spanish Captain Martinez had reached Nootka in May, 1789, and had captured the *North West America* on its return from coastal trade with the natives. The Spaniards had seized two hundred and fifteen otter skins and had formally taken possession of the area.

Captain George Vancouver of Britain and Don Bodega y Quadra of Spain came to Nootka in 1792 to carry out the terms of the Nootka Convention which restored the land to Britain. Before proceeding directly to Nootka, Vancouver circumnavigated the large island now bearing his name and honoured members of his travel-weary crew by giving their names to Mount Baker, Mount Rainier, Puget Sound, Burrard Inlet and Johnstone Strait. Not until he had completed a detailed charting of the coast to

52°18' N. latitude did he sail for Nootka Sound where Quadra had awaited him for several months "with the greatest impatience to deliver up the settlement and territories at Nootka". However, the representatives of the conflicting nations placed different in-

terpretations on their instructions. Awaiting further orders from England, Vancouver devoted his energy to exploring such fiords as Burke Channel, Dean Channel, Portland Canal and Observatory Inlet.

In the half century following the withdrawal of the Spaniards from the Pacific Northwest as a result of the Nootka Convention, the British Government gave little attention to this area. Fortunately the North West Company and its successor, the Hudson's Bay Company, saw great possibilities in the fur trade and so sent dauntless bands into the unknown West to establish fur posts that ultimately grew into thriving towns and cities. In the vanguard of these pioneers was Alexander Mackenzie, who crossed central British Columbia to reach the Pacific near Bella Coola in 1793. David Thompson explored the southern interior of the province between 1800 and 1811. Simon Fraser paddled down the Fraser to its mouth in 1808. Lewis and Clark trekked across western United States and followed the Columbia to the sea in 1805.

Ownership of the region in the vicinity of the mouth of Columbia River and the lower Fraser River had become a contentious matter between officials of the British fur trading company and American settlers by 1840. The 49th parallel North latitude had been declared the international boundary as far west as the Rockies in 1818 but the dividing line beyond was indefinite. Among some of the pioneers in the Oregon country the agitation reached considerable magnitude, almost precipitating war under the jingoistic slogan of "54°40' or fight". The Oregon Treaty of 1846 settled the issue. It proclaimed 49° N. latitude as the southern boundary of British territory from the Rockies to the Pacific; from there the line extended through the channel separating Vancouver Island and the mainland and thence through the middle of the Strait of Juan de Fuca to the sea.

The selection of this international boundary was no doubt influenced by the fact that the Hudson's Bay Company had previously moved its western headquarters from Van-



16th CENTURY
VESSEL



couver on the Columbia River to the present site of Victoria on Vancouver Island. James Douglas aboard *The Beaver*, the first steamship in this area, had selected a small beautiful harbour on the southern tip of the island in

1842. Here in 1843 was erected a trading post called Fort Victoria. This became the capital of Vancouver Island in 1849 when the area was proclaimed a Crown Colony of Great Britain. Richard Blanshard held office as the first Governor being followed by James Douglas, then chief factor of the Hudson's Bay Company, who ruled with a firm hand during the hectic period of the gold rush.

In 1856 a small representative assembly was convened on the island to administer the colony's affairs. Three years later a number of administrative buildings were erected on Government Street, Victoria. The cost of over \$100,000 was borne by the Hudson's Bay Company. With the exception of the one building now used by the Department of Mines, these were replaced in 1897 by massive stone Parliament Buildings of artistic proportions.

The discovery of gold in the Fraser River sand bars near Lytton in 1858 precipitated an influx of miners and settlers that swelled the populations of Victoria and New Caledonia on the mainland by thirty thousand. New Caledonia became a Crown Colony on August 20 of that year under the new name British Columbia and with this the Hudson's Bay Company relinquished exclusive trading rights in the area.

To reduce the operational expenses of the two neighbouring colonies of British Columbia and Vancouver Island, a union was effected on August 6, 1866. Victoria was selected in 1867 as the seat of government for Governor Frederick Seymour and a legislative council of twenty-three representatives. The years from 1866 to 1871 represent the "Critical Period in British Columbia's History". The union of the two colonies, by fiat of the Imperial Government, was far from popular on the mainland: amalgamation had failed to solve the economic troubles that had followed the petering out of gold mines in the Cariboo. A cry went up in favour of confederation. This was supported at meetings in Victoria, Barkerville and Yale. It was claimed that federation

Cariboo Highway and Fraser River

B.C. Travel Bureau photo



with other Canadian provinces would bring overland communication and thus put an end to the West's isolation. It would also bring responsible government in place of administration by a legislature composed of elected and appointed officials. Active among those who promoted a desire for federation were the 'overlanders' from Ontario who had trekked into the Cariboo gold fields.



GOLD!

British Columbians celebrated their first Dominion Day on July 1, 1871. It was understood that the Dominion Government would assume all debts and liabilities of the colony. Federal grants were to be paid toward the cost of the Provincial Government. The construction of a railway was to commence within two years to link the seaboard of British Columbia with the rest of Canada.

Prolonged preliminary surveys of the railway route, legal action, and indecision as to the choice of Port Moody, Vancouver or Victoria as the terminus of the Canadian Pacific Railway went on for fifteen years before the building of the terminal was started on Coal Harbour at Granville, now called Vancouver. Port Moody was declared the statutory terminus. The first trans-continental train with 150 passengers reached Port Moody on July 5, 1886. It was only one minute behind schedule after a 136-hour journey of 2,907 miles from Montreal. On May 23, 1887, Vancouver noisily welcomed its first through train which bore a painting of Queen Victoria in honour of her jubilee. It carried signs reading "From Ocean to Ocean", "Our National Highway" and "Montreal Greets the Terminal City".

THE PROVINCIAL GOVERNMENT

Today's government rests largely in the hands of the Premier and Cabinet who are responsible to the Legislative Assembly of forty-eight representatives. A provincial election is held every five years unless the cabinet and its supporters receive an adverse vote from the legislature. There is no senate

Natural Arch, Blue Creek Valley
C.N.R. photo



Emperor Falls, Mount Robson, elevation 12,972 feet
C.N.R. photo





Looking down the Skeena River Valley, over forests of black cottonwood, spruce and hemlock, towards the Coast Mountains.

B.C. Government air photo

as in the Dominion Parliament. The Lieutenant-Governor is appointed by the Governor-General in Council to represent the King. His official residence is at Government House, Victoria, where spacious and beautifully landscaped grounds overlook the twenty-mile-wide strait of Juan de Fuca that stretches toward the Olympic Mountains beyond the international boundary.

GEOGRAPHICAL DESCRIPTION

British Columbia ranks next to Quebec and Ontario as the third largest province, with an area of 366,255 square miles. It has an average width of 400 miles. The mainland stretches from 49° N. to 60° N. latitude, a distance of about 750 miles. The "Pacific Province" shares the crest of the Rockies and the 120th western meridian as a common boundary with Alberta on the east. To the north are Yukon Territory and Northwest Territories. In the northwest is the Alaskan 'panhandle' which cuts off northern British Columbia from the sea as far south as 55° N. latitude. The states of Washington, Idaho and Montana flank the southern border.

TOPOGRAPHY

A flight on a Trans-Canada aeroplane eastwards across British Columbia leaves one with the general impression that the province is a "sea of mountains". A closer

inspection reveals a breath-taking panorama comprising a string of islands, a long sinuous shoreline with hardly any coastal plain and a series of mountain ranges running in a northwesterly direction between which lie wide plateaux and narrow valleys.

With the exception of the northeast corner, all the province is occupied by the ranges and plateaux of the massive Cordillera Highland. The jagged, ice-clad peaks of the Rockies rise from a base about 60 miles wide to an average elevation of between 6,000 and 7,000 feet along the eastern rim of the Cordillera. These rugged mountains were thrown up during the Later Age of Reptiles. Because of their youth, the weather and glaciers have had insufficient time to round them off. Eternal snow fields and coniferous forests of lodgepole pine, white spruce, balsam fir, and larch, broken by flower-dotted parklands, cover the great folds and fault-blocks which contain thick sediments of the Palaeozoic and Mesozoic Periods.

King of the Rockies is Mount Robson. Its majestic loveliness is readily enjoyed by travellers on the Canadian National Railway which runs through Yellowhead Pass. Equally pleasing glacier-tipped peaks with their sombre forests, alpine meadows and silvery waterfalls rise close to the lines of the Canadian Pacific Railway leading over



MOUNTAINEERS

Kicking Horse and Crowsnest Passes farther south. Vacationists, hunters, fishermen, artists, and colour photographers can all find a stimulating and refreshing challenge in the pristine beauty of Mount Robson Park, Hamber Park, Yoho Park, Glacier Park, Mount

Revelstoke Park, Kootenay Park, and Mount Assiniboine Park that extend southwards from Yellowhead Pass.

The Coast Mountains with their thickly timbered slopes rise sharply from the Pacific to form the western ramparts of the Cordillera. Their origin dates back to the middle of the Age of Reptiles. Their massive rocks are the result of igneous activity. This western range reaches heights of 6,000 and 7,000 feet and is about 100 miles across. Samples of its grandeur can be seen in Tweedsmuir Park which lies adjacent to Bella Coola, and in Garibaldi Park which is close to the

Pacific Great Eastern Railway and not far from Vancouver. A partially submerged chain of mountains off the mainland shore is responsible for the archipelago of lovely forest-clad islands. Vancouver Island and the Queen Charlotte Islands are the largest of these.

The mountain chain running parallel with the Rockies, a short distance to the west, forms one wall of the glacier-carved Rocky Mountain Trench that extends the full length of the province. The trench has a varying width of 2 to 15 miles and lies at an elevation of roughly 2,400 feet. This extensive range contains three mountain blocks from north to south—the Cassiar, the Cariboo and the Columbia. Forests of cedar, Douglas fir and hemlock clothe their lower slopes. The denser stands grow on the wetter western slopes that receive rain from the moisture-bearing Westerlies. The Columbia Range contains the well-known Selkirk, Purcell and Monashee Mountains. These

A vista of Douglas fir, coast forest

K. S. Brown photo
Courtesy West Coast Lumbermen's Assoc.





Hell's Gate on Thompson River, near Messiter
Photo by G. M. Dallyn

dominate the scenery and human activity of the southeastern corner of the province.

The Interior Plateau stretches through the centre of the province in a northwesterly direction. It measures about 200 miles wide in the south but narrows to the north. This undulating tableland was originally 3,500 feet above sea level. It is now dissected and eroded by deep valleys with varying areas of bottom and bench lands adjoining, particularly on the banks of the mighty Fraser, Thompson and tributary rivers. This plateau is a land of sage brush, bunch grass and thin forests of yellow pine, Engelmann spruce, alpine fir and lodgepole pine since the precipitation amounts to less than 20 inches annually in the rain shadow of the Coast Mountains.

CLIMATE

In general the climate of British Columbia is of the cool temperate type. Two well-defined climatic belts occur—the oceanic on the coastlands and the continental in the interior. A series of wet and dry belts result

from the interference of the several parallel mountain ranges with the eastward movement of warm moisture-laden winds blowing off the Japan Current in the Pacific.

Inhabitants of the lower coastal belt enjoy equable weather practically all year round, there being a variation of about 30° between the summer and winter mean. The rainfall averages about 65 inches annually. The range of temperature in the northern coast belt is 5° greater. Annual precipitation averages 110 inches with some of this in the form of snow.

Residents of the Interior Plateau experience mean temperatures in summer and winter that vary by 60° . However, there are compensations in the clear skies, bright sunshine and bracing air of this highland. The Westerlies have only 9 to 14 inches of moisture for the Dry Belt by the time they have crossed the Coast Range. They have lost the warmth they originally received from the Japan Current. Largely because of distance from the sea and altitude, the plateau has from two to three months of frost.

The air of the elevated valleys of the Columbia-Kootenay district is invigorating and generally dry. Precipitation during a year is from 18 to 20 inches with more moisture falling on the west slopes of the mountains and less on the east. The mean temperature of July is 61°F . and that of January is 27°F .

Great extremes of temperature occur in the northern section of the Interior Plateau with a yearly range from 40° below zero to 90° above. Fortunately the periods of extremes are short. Precipitation ranges from 16 to 20 inches annually. The Peace River district enjoys a moderate climate. The low elevation of the Rockies to the west permits the Westerlies to bring a moderating influence from the sea. The Chinooks that descend the mountain slopes bring mild weather to the area. Thermometer readings average 1°F . in winter and 58°F . in summer. Winters at Fort St. John are less severe than at Winnipeg, about 500 miles farther south. Summer days bring many hours of daylight with the result that wheat ripens in 95 to

BRITISH COLUMBIA

100 days at Rolla and Pouce Coupe compared with 110 days required for the same species grown well to the south.

POPULATION

It is estimated that there are now one million people in British Columbia although the 1941 census puts the number at 817,861. Seventy per cent are of British stock; the others are mainly of European origin. There are a few Asiatics. About six-tenths of the inhabitants reside on the coastal strip which has a milder climate and greater industrial opportunities than the interior. The majority of these live in the Lower Fraser Valley and Greater Vancouver.

The above total includes some 25,000 Indians who live on reserves as wards of the Dominion Government. These are descendants of the natives who migrated from Asia to North America via Bering Strait. The coastal tribes developed a culture largely dependent upon the many salmon found in tidal waters and upon the easily-worked cedar tree. They lived in large communal houses built of cedar planks. The northern tribes showed considerable skill in carving weird totem poles, heraldic house posts and grave posts. Travel was by canoes



The interior plateau at the junction of the Fraser and Chilcotin Rivers

B.C. Government air photo





Quesnel, where the Quesnel River joins the Fraser, gateway to the Cariboo region

B.C. Travel Bureau photo

carved from cedars with tools of stone and bone. Storage chests, cradles, coffins and domestic utensils were fashioned from this wood. Cedar bark fibres were woven into clothing and fishing equipment.

Natives of the southern interior lived in teepees in the summer and in semi-subterranean houses in the winter. The latter were circular in shape having a diameter of from 15 to 45 feet. River and lake fish, salmon that came up the Fraser and Columbia to spawn,

deer, berries and roots were used for food. In general the art of the interior Indians was not as well developed as that of the coast natives because the tribes in the interior were more nomadic. Birch bark, balsam poplar, bulrushes and grasses were used in place of the cedar and spruce employed by coastal tribes.

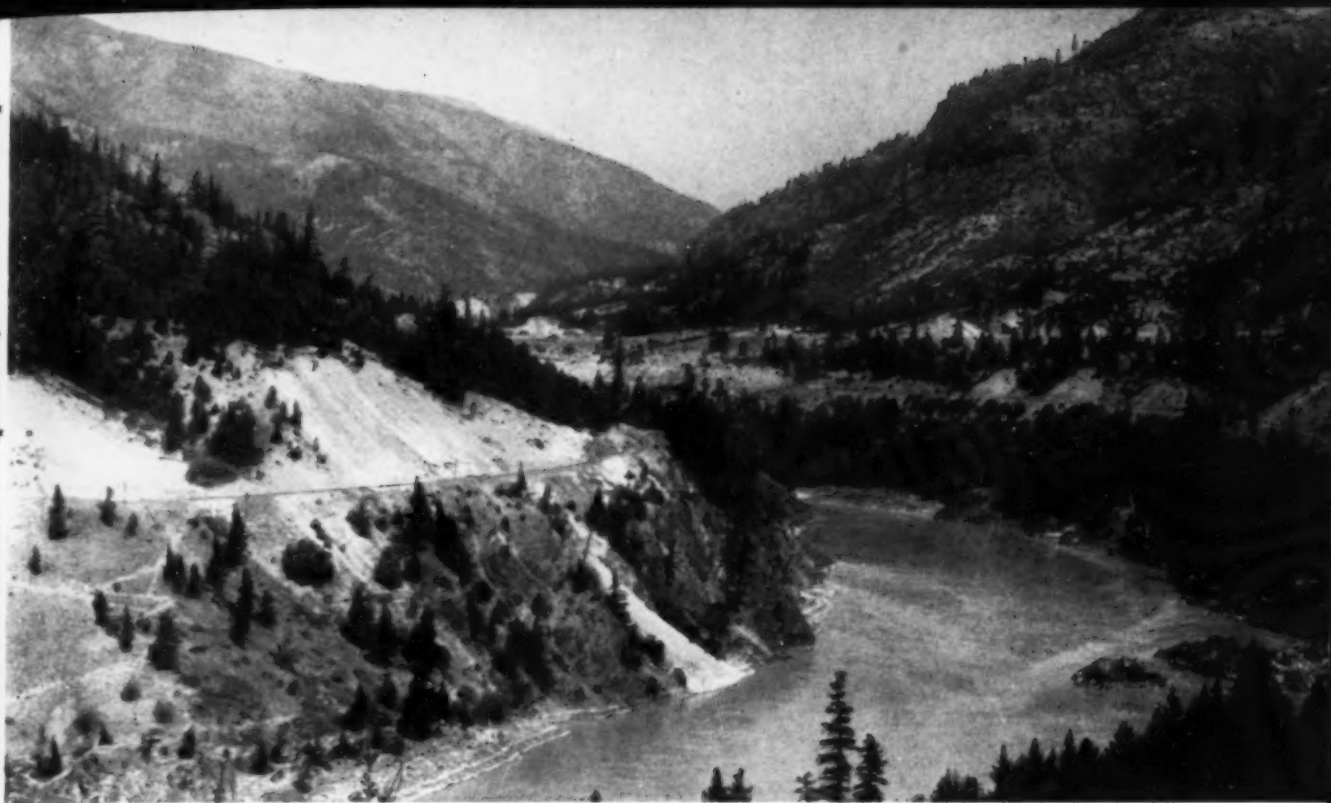
The northern interior was the home of the Athapaskan Indians who depended on the

caribou for almost every necessity of life. These natives moved in family units as they pursued the swift-moving herds across the grasslands. The women carried the burdens, thus leaving the men free to hunt caribou.

WATERWAYS

Mightiest of British Columbia's rivers is the Fraser which follows an S-shaped course across the southern half of the province for 750 miles to drain some 98,000 square miles. It flows north from its source near Mount Robson to leave the Rocky Mountain Trench as it rounds the Cariboo Mountains, where it is joined by the Nechako from the west. Prince George, at the confluence of these two rivers, has grown from a fur post, established by Simon Fraser in 1808, into the chief trading depot of central British Columbia. The muddy Fraser runs southwards from here to cross the Interior Plateau. It is augmented by the Quesnel River from Quesnel Lake on the east, by the Chilcotin from Chilko Lake on the west, and farther south by the Thompson from the east.





The dry belt on the Thompson River, north of Lytton

B.C. Travel Bureau photo

Thompson River was named after the energetic trader who devoted four years to exploring the waterways of the southeastern corner of British Columbia for the North West Company. The South Thompson begins in Shuswap and Adams Lakes in the Monashee Mountains; it flows smoothly across wide stretches of cattle country and past wooded hills to join the North Thompson at the thriving interior city of Kamloops. Here the combined rivers broaden to form lovely Kamloops Lake. Approaching Ashcroft, the Thompson bends southwards to rush between massive escarpments of a rocky, colour-streaked gorge. Beyond this is the historic town of Lytton where the clear, glacier-fed waters of the Thompson mingle with the silt-laden flood of the Fraser.

From Lytton to Hope the Fraser seethes through a series of wild chasms and rocky canyons enclosed between wooded slopes of the Coast Range. The tracks of two trans-continental railways cling perilously to the steep walls high above the churning waters.

There is also the old Cariboo Highway,

modernized in recent years, which the Royal Engineers built from Yale to Barkerville between 1862 and 1865 under the direction of James Douglas, the "King of Roads". Modern vehicles speed over the extended highway from Vancouver to Prince George, covering parts of a scenic route where once moved a colourful pageant of stage coaches, ox carts, camel trains and gaily-uniformed riders en route to and from the Cariboo gold fields.

Above Yale the swirling, murky Fraser dashes between the jagged narrow walls of Hell's Gate where newly built concrete fishways permit millions of silver salmon to reach the spawning grounds. Once out of the canyon, the Fraser flows westwards across an ever-widening fertile valley enclosed by forested hills. Near the prosperous farming centre of Chilliwack, the Harrison River joins the main stream bringing water from Lillooet and Harrison Lakes that lie among



CARIBOO ROAD



Columbia River about 50 miles north of Golden, on the Big Bend Highway

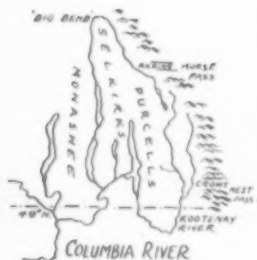
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wooded hills to the north. The last part of the Fraser's course is across a low-lying alluvial plain where mechanized farms and herds of dairy cattle may be seen behind protecting dikes. The silt-laden Fraser slackens speed on approaching the Gulf of Georgia where it adds rich soil to the margins of Lulu Island, Sea Island and other productive islands at its wide delta mouth.

The Columbia River drains the southeastern corner of the province. It rises in Columbia and Windermere Lakes just south of Kootenay National Park. The river flows placidly northwards in the Rocky Mountain Trench to Golden where it meets Kicking Horse River coming from the famous skiing

grounds of Yoho National Park. Then the Columbia hurries northwestwards through picturesque canyons into Kinbasket Lake before leaping over "Twenty-One Mile Cataract".

After receiving Canoe River, the Columbia makes its famous "Big Bend" around the Selkirks to flow southwards over sand bars once feverishly panned by gold miners. Then it foams between the narrow walls of Rock Slide, dashes through the terrifying Dalles de Mort, and seethes over Priest Rapids which once claimed the lives of two missionaries. Running more smoothly, the river passes the busy railway divisional point of Revelstoke soon to join the glacier-fed Illecillewaet River coming from Glacier National Park on the east. Southwards the Columbia expands into Upper and Lower Arrow Lakes



whose lovely shorelines are flanked with productive benchlands broken by mountain masses.

The Columbia's chief tributary, the Kootenay, enters the main stream just south of Lower Arrow Lake bearing water from Kootenay Lake which lies parallel with the Arrow Lakes. On leaving the narrow west arm of Kootenay Lake, the Kootenay flows by the town of Nelson to leap over Upper and Lower Bonnington Falls that drop 63 and 34 feet respectively. Before entering the main stream, the Kootenay is augmented by the waters of Slocan Lake and River that drain a highly mineralized region.

The other important tributary is the Okanagan which comes from Okanagan Lake lying west of, and parallel to, the Arrow Lakes and which receives the Similkameen near the border. Apple orchards line the banks of the Okanagan as it runs through British Columbia and Washington to join the Columbia. From this point the Columbia's route is southwards and then westwards through a gorge in the Cascades whose rugged grandeur rivals that of the Fraser canyon.

West central British Columbia is drained by the Skeena River whose course from the

Arctic-Pacific Divide in the Cassiar System to the ocean is 350 miles long. Midway to the Pacific it meets Babine River which flows over a series of rapids from Babine Lake whose length of 110 miles and width of 7 miles make it the largest lake in the province. The swift-flowing Bulkley enters the Skeena from the south having come from Rose and Bulkley Lakes. It rushes through an undulating valley 5 to 12 miles wide to force its way between the deep walls of Bulkley Canyon where a protruding wall of rock about 8 feet thick and 150 feet tall seemingly tries to restrain its progress through the Coast Mountains.

Westbound transcontinental trains of the Canadian National Railways follow the Bulkley to Hazelton, to cross to the west bank of the Skeena by a suspension bridge 450 feet long and 250 feet above the foaming water. South of the town are the picturesque Indian settlements of Kitwanga and Cedarvale. An old 'grease' trail joins the former with Ayance on the Nass River, 50 miles to the north. This marks a route used long ago by coast natives carrying oolichan grease, dried seaweed and woven baskets to exchange with the interior Indians for furs and caribou hides.

Revelstoke on the Columbia River, entrance to Mount Revelstoke Park

B.C. Travel Bureau photo





The Forbidden Plateau, Vancouver Island

B.C. Travel Bureau photo

About halfway between Hazelton and the sea, the Skeena meets the Kitsumgallum River draining the fertile valley where stands the prosperous, mixed-farming town of Terrace. From there the silt-laden Skeena hurries down a wild and glorious mountain-flanked valley to reach the sea, where it divides among the many alluvial islands of its own creation.

The Nass River begins in the Cassiar District and runs north of, and almost parallel with, the Skeena. In its upper stretches the Nass traverses a series of plateaux to enter a valley that is about 8 miles across, within 60 miles of the Pacific. The lower course is down a narrow valley, from 1 to 3 miles wide, that terminates in Nass Bay on Portland Canal.

The majestic Peace, with its source streams the Finlay and Parsnip, drains

northeastern British Columbia and also 115,000 square miles of adjoining Alberta. The Finlay flows southwards through a valley 6 to 8 miles wide between the Rockies and the Cassiar Ranges. It is augmented by the Omineca River which drains a rich gold mining area before scurrying through Black Canyon, eleven miles from the confluence of these two rivers.

The Parsnip, flowing northwards, is joined about midway along its course by an almost parallel waterway consisting of Summit Lake, Crooked River, McLeod Lake and Pack River. This forms an important route for river boats that bring supplies to British Columbia's northland from Prince George, about forty miles south of Summit Lake. The Parsnip and Finlay combine to form the Peace at Finlay Forks. From there the mighty Peace runs eastwards to burst



Jervis Inlet, a few miles north of Vancouver

B.C. Travel Bureau photo

through the canyon in Butler Range and emerge at Hudson Hope. It flows about another hundred miles to reach the inter-provincial border and then winds across northwestern Alberta to meet Slave River, a tributary of the Mackenzie.

REGIONS

The Inside Passage is one of the important and most scenic features of the province. Its rugged grandeur can be seen best from steamers that ply this tortuous waterway between the archipelago of wooded islands and the indented mountainous shore.

Largest and most southern of the hilly archipelago is Vancouver Island. For its length of 285 miles it lies parallel with the mainland coast beyond the Gulf of Georgia. Its lovely scenery and all-year-round outdoor sports have earned for it the name "Pleasure



Mouth of the Bella Coola River and the Coast Range

R.C.A.F. official photo



Above:—Ranching on benchlands in the Fraser Valley

B.C. Travel Bureau photo

Left:—Mountain sheep grazing J. H. Munro photo



Island". In contrast to the relatively smooth and sheltered east shore, where small coastal plains touch the gulf, the western shoreline consists of a series of narrow inlets like Alberni Canal, Nootka Sound and Quatsino Sound. These provide safe and also picturesque sites for lumber mills, fish plants and mining towns. Scenic highways in the southeastern part lead to the fertile Saanich Peninsula, over the beautiful Malahat Drive, past the summer resorts of Parksville and Qualicum to the Forbidden Plateau and to the excellent fishing grounds at Campbell River, Buttle Lake, and Great Central Lake.



STEELHEADS

Looking across downtown Vancouver to the shipyards and residences on the north shore of Burrard Inlet. Marine Building at left

Photo by G. M. Dallyn



Moresby and Graham are the largest of the hundred and fifty islands of the Queen Charlotte group lying about 150 miles north of Vancouver Island. Forests of hemlock, cedar and sitka spruce cover the flanks of the mountainous terrain of the Queen Charlottes. These trees respond well to the humidity of the "fog belt".

The mainland shore is a maze of island-locked mountain-bordered fiords that are the result of river erosion and glacial action and also of the submergence of the coast. A seemingly illimitable sombre green mantle of commercially valuable cedar, hemlock, Douglas fir and spruce reaches from the water's edge up the slopes of the glacier-draped Coast Range to an elevation of about 5,000 feet.

Howe Sound, Jervis, Bute, Knight and Kingcome Inlets are but a few of the many entrancingly lovely sea-filled valleys in the south that lead inland from the Gulf of Georgia, Seymour Narrows and Johnstone Strait. Here stand isolated logging camps, noisy sawmills, busy fish canneries and quaint Indian villages.

Burke and Dean Channels face the open Pacific between Vancouver Island and the Queen Charlottes: these glacier-scoured val-

leys, a mile wide and over sixty miles long, are now tongues of the sea. At the head of the former is Bella Coola Valley where 40-year-old farms and the 42-mile roadway to Tweedsmuir Park occupy a valley once traversed by Alexander Mackenzie. Well to the north, and bordering on Alaska, are Portland Canal and Observatory Inlet; these lead from Dixon Entrance toward the rich silver and gold fields beyond Stewart.

The Lower Fraser Valley is a V-shaped flood plain embracing 900 square miles extending from the Gulf of Georgia to Hope. Here alluvial deposits of great fertility cover the bed of an old arm of the Pacific. The surface slopes from the diked lands at sea level to heights of 400 feet and hills 1,000 feet high where valuable forests of cedar, fir and hemlock grow, particularly in the watersheds of Pitt, Harrison and Stave Lakes.

The northern part of the Interior Plateau lies relatively dormant and unexplored. There has been considerable development of the Fraser River basin, however, between 51° N. latitude and 55° N. latitude. This rolling upland, hilly in places and deeply cut by troughs flanked by benches, is ideal for cattle raising. The open range land is broken by stands of willow, jackpine and poplar. The



Lions Gate Bridge at the entrance to Vancouver harbour

Photo by G. M. Dallyn

latter add a vivid touch of colour to the landscape in the fall when the foliage tints the hillsides with yellow and gold. On the east of the river is the romantic Cariboo and on the west is the Chilcotin-Lillooet plateau. The whole country is generally covered with glacial drift and the ridges are gravelly. Settlements lie mainly close to the Cariboo Highway and to the Pacific Great Eastern Railway. The railway runs from Squamish on Howe Sound and through the scenic Cheakamus River Canyon in the Coast Range to Quesnel about 350 miles north of Vancouver.

The Cariboo is popular with sportsmen who come to Quesnel Lake, Bridge River, Horsefly or Lac la Hache to shoot moose, caribou, black bear, duck, partridge, and geese or to catch rainbow trout, cut-throats and steelheads.

The Okanagan-Kootenay region includes the triangular southeastern part of the province. The Columbia system of mountains occupies the eastern three-quarters of this

region with the Selkirks in the centre, the Purcells to the east, and the Monashee on the west. Largest among the delightful lakes of this area are the Kootenay, Okanagan, Upper Arrow and Lower Arrow. The main line of the Canadian Pacific Railway passes through Revelstoke from Kamloops to serve the northern part. The Big Bend motor highway caters to motorists en route to Golden and Banff. The Canadian Pacific Railway line through Nelson via the Crowsnest Pass and the transprovincial motor road link towns near the international boundary.

Moose, Rocky Mountain sheep, white-tail deer and mule deer inhabit the Kootenay country. Adams Lake and Little River to the north of the Okanagan Valley claim to have the best fishing in British Columbia. At Sicamous Hotel on Shuswap Lake, boats are rented on the basis of "no fish, no pay".

Finally there is the Peace River District of British Columbia that covers 53,000 square miles of rolling plateau in the north-eastern corner of the province. About one third is open prairie; the rest is timbered with poplar, willow, cottonwood and spruce. Thousands of acres of good deep soil, formed by the weathering of outwash and morainal glacial deposits, are capable of producing millions of bushels of grain for export. Access to this land east of the Rockies is by the Edmonton, Dunvegan and British Columbia Railway from Edmonton to Pouce Coupe and Dawson Creek; by the Alaska Highway leading from Edmonton to Fairbanks, Alaska, via Dawson Creek; or by the Pine Pass Highway now under construction to join Dawson Creek with Prince George, 268 miles away.

CITIES

Vancouver, Pacific Gateway of British Columbia and third largest city of Canada, bears the name of the English sea captain who entered the First Narrows on June 13, 1792, to find the beautiful natural harbour of Burrard Inlet. For years it was known as "Gastown" and Granville, eventually receiving its present name on incorporation as a city in 1886. With the arrival of the first transcontinental train a year later, to link

BRITISH COLUMBIA

"steel with keel", Vancouver began to fulfil its destiny as the chief port of Western Canada—a destiny still further assured with the opening of the Panama Canal in 1914.

The well-sheltered inlet is ever alive with ferries shuttling back and forth between Vancouver and the north shore, and with coastwise steamers of the Canadian Pacific Railway and Union Steamship Companies. Vancouver warehouses carry on much trade with the sawmills, mines, fish canneries and farms scattered along the coast and throughout the interior. Deep sea vessels call for British Columbia lumber, apples and canned salmon and for prairie wheat in exchange for cargoes from all parts of the globe. Fast passenger liners connect this western metropolis with the Orient, Australia, New Zealand and Hawaii.

The third of a million people in Greater Vancouver, and many tourists, find excellent opportunities for recreation along miles of beaches, in the great civic playground of 1,007 acres at Stanley Park and on the many golf courses that are open all year. Lions Gate Bridge throws what is claimed to be the longest suspension in the British Empire across Burrard Inlet to permit three lanes of

traffic to reach the residential acres of West Vancouver and Capilano and also the skiing grounds of Hollyburn, Seymour and Grouse Mountains.

Vancouver is the leading educational centre of the province for here are the University of British Columbia at Point Grey, the Provincial Normal School and the Vancouver School of Art.

Victoria at the southern end of Vancouver Island is the provincial capital, the first port of call in Canada for transpacific steamers and a city of enchanting seascapes and beautiful gardens. It began in 1843 when the Hudson's Bay Company built a formidable stockade of cedar pickets, a hundred yards square, in the vicinity of what is now Bastion Square, in the vicinity of what is now Bastion Street. Today its residents and those of the environs number about 90,000. This is roughly two-thirds of the Island's population.

The tourist enters the small, yet lovely, Inner Harbour after passing the granite breakwater at the outer wharf on the right and the fortified entrance to Esquimalt harbour and naval base on the left. As he steps off the handsome coastal vessel from Van-



BASTION, FT VICTORIA

The Empress Hotel and the Causeway, Inner Harbour, Victoria.

Photo by G. M. Dallyn





Vancouver's West End. Looking northwest, with Stanley Park and Lions Gate Bridge in centre, West Vancouver and Hollyburn Mountain in background. Aero Surveys Ltd. photo

Prince Rupert and the Coast Range

R.C.A.F. official photo





The municipality of Marpole on the north arm of the Fraser, near the river's mouth, looking northwest. Eburne sawmill in foreground.

Aero Surveys Ltd. photos

New Westminster, looking northeast. Lulu Island bridge in foreground, Pacific Coast terminals in centre. In right background Pattullo Bridge across the Fraser River.





*Capilano Canyon, looking north from Stanley Park, Vancouver. Lions Gate Bridge in foreground;
British Pacific Properties in left background.*

Aero Surveys Ltd. photo

*Tasis, at the head of Nootka Sound, is typical of the small lumber towns on the fiords along
the tree-clad shoreline*

B.C. Travel Bureau photo



couver or Seattle, or from the ferry from Port Angeles, Washington, the visitor is almost on the extensive lawns of the massive Parliament Buildings and of the luxurious ivy-clad Empress Hotel. A block from "the causeway", where one may idle away a pleasant hour watching yachts and ships come and go, are the Crystal Gardens where swimming and dancing may be enjoyed under glass. Across the street is Thunderbird Park with its Indian totem poles and relics. Just beyond are the rose gardens and swans of Beacon Hill Park whose spacious fields slope down to the famous Marine Drive overlooking the Strait of Juan de Fuca and the serrated Olympic Mountains.

Although lumber mills, paint works, a rubber-roofing factory, canneries, shipyards and other industrial plants bring wealth to Victoria, the capital is perhaps best known as an attractive residential city and a Mecca for tourists. A drive around the waterfront, with its lovely homes and well trimmed gardens, is a delightful experience. Or one may motor over the Saanich Peninsula past the Dominion Experimental Farm, and on to the world-famous Butchart's Gardens that fill an old cement rock quarry. Close by are Saanich Inlet with its excellent salmon trolling grounds and Little Saanich Mountain where stands the Dominion Astrophysical Observatory. It is said that Victoria is a "bit of old England"; whether this be justified or not, visitors may join with residents

in listening to the rapturous notes of English skylarks in the uplands near the Provincial Normal School and Victoria College.

New Westminster is known as the "Royal City" because it was so named by Queen Victoria. It served as the capital of the mainland until 1868. In the days of the gold rush it became the gateway to the mining camps and the mint for Cariboo gold. This progressive city has developed into Canada's third largest exporting centre, standing as it does on a sunny slope overlooking the broad, brown flood of the Fraser, 15 miles from its mouth. About 500 freighters a year call at New Westminster's waterfront to load products from the sawmills, creameries, condensed milk plants and salmon canneries of the Lower Fraser Valley.

New Westminster is linked with Vancouver, a short distance away, by a broad highway, an interurban branch of the B. C. Electric Railway Company, the Canadian National Railways and a branch line of the Canadian Pacific Railway. The four million dollar Pattullo Bridge spans the Fraser a short distance above the "Royal City" to form part of the Pacific Highway leading into the U. S. A.

The fourth important town on the coast is Prince Rupert on Kaien Island at the mouth of the Skeena. A fine view of the harbour, the town, and the Coast Range beyond is a satisfying reward to those who climb Totem Hill. Transcontinental trains of the Canadian

Salmon boats with gill nets spread out at Rivers Inlet

B.C. Fisheries Dept. photo





A panoramic view of Port Alberni sawmill which has been a corner stone in the logging series next page, employs 500 men the year around and exports 100,000 feet of lumber per day. Logs come from Franklin River and Sprooket River. The mill is an export mill, with deep sea ships loading at the mill dock, the bulk of the lumber. With curtailment of shipping during the war years transport across the Canadian Kingdom loading was necessitated; hence the need of the huge docks.

National connect with C.P.R., C.N.R. and Union steamers that sail southeastwards to Vancouver, 550 miles away. The magnificent ice-free harbour shelters spacious docks, a grain elevator with a capacity of 2,500,000 bushels, cold storage plants, salmon canneries, a dry dock and lumber mills. The city is the distributing point for the Skeena Valley and a hinterland rich in minerals, timber and agricultural resources. It is also a busy collecting and shipping centre for the halibut and salmon fisheries.

Kamloops is the chief distributing point for the southern Dry Belt and is the centre of the cattle raising country. This attractive and substantially built interior town is located at the confluence of the North and South Thompson Rivers. The main lines of

A section of the plant of the Powell River Company, 80 miles north of Vancouver. This plant is the pioneer newsprint producer of B.C.





as been a continuous operation since 1934. This mill, referred to as the Sproat Lake operations. Originally built as an overseas dock, the bulk of its product was shipped without being kiln-dried. The transport across Canada by rail of kiln-dried lumber for United States markets is a huge dry kiln sheds to be observed on the right.

the C.P.R. and C.N.R. have railway shops here. Kamloops has a delightful climate: the many hours of sunshine, the altitude and the dry air have brought it and nearby Tran- quille much fame as health resorts.

Prince George at the junction of the Fraser and Nechako Rivers is the "hub of central British Columbia". It is

the business, transportation and cultural centre for the farming, trapping, mining and lumbering communities located along the Canadian National Railway, along the vast waterways of the north and along the all-weather highways from the south and west.



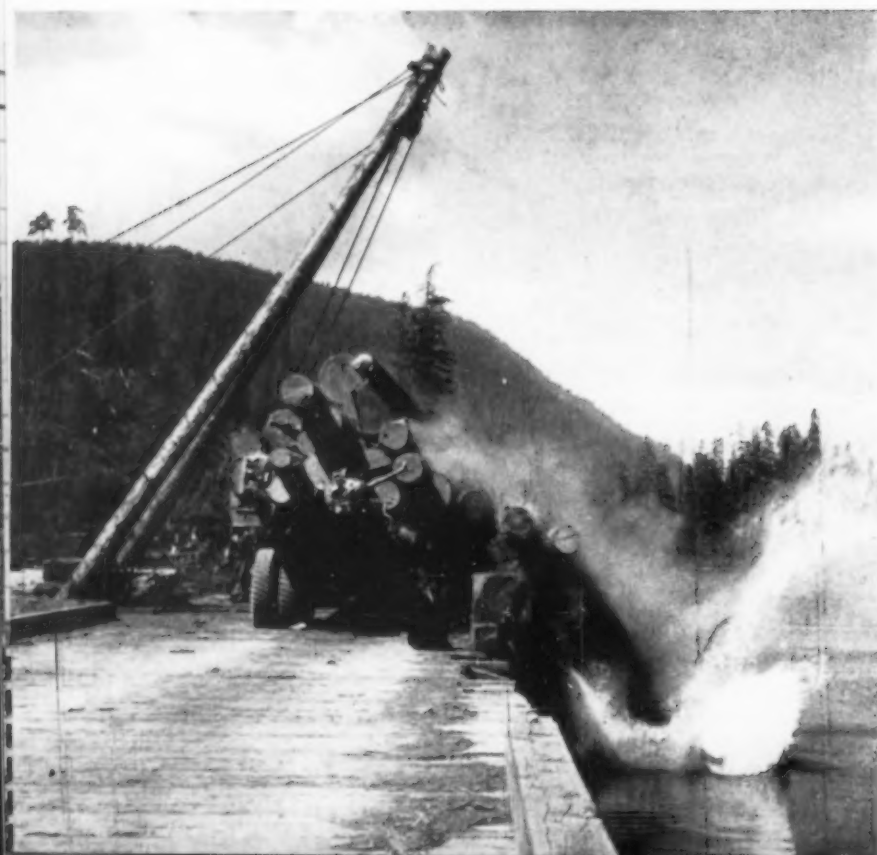
HALIBUT FISHING

Salmon trollers. The poles are lowered close to the water when the boats are trolling.





Camp 10, of Bloedel, Stewart & Welch Limited, located on Taylor Arm of Sproat Lake, about 15 miles from Port Alberni, Vancouver Island. An "A-Frame" skidder operates from this camp, logging timber from the shore hills of the lake directly into the lake. In the immediate foreground is the office, with a new guest house, under construction, being attached to it; immediately behind it is the cook house and dining room. Note the angle at which the bunk-houses are set to the main walk through camp, to provide maximum light and breeze to each. This camp houses 120 men.



Dumping a truck-load of logs over the log dump at Great Central. A gasoline-powered winch to the left (not shown in photo) activates the steel cables passing through a pulley attached to the top of the leaning "gin poles". The cables pass underneath the load and when tightened automatically lift the logs up and slide the load over the dump into the water in one lifting action.



View from B.S. & W. truck logging operations at Great Central. Sproat Lake may be seen in the distance; at right centre is a dust cloud raised by a logging truck heading down the hill with a load of logs, while at left centre smoke from the sawmill on Sproat Lake may be seen. In the distant background a wisp of smoke may be noted rising from the mills in Port Alberni. To the conservationist it is of interest to know that the logged slash seen in the foreground is even now being re-logged, the product being sawn up by small portable mills. The ties and lumber produced are hauled by truck to the Port Alberni mill. Slabs and trimmings will be utilized for conversion to pulp in the Company's new seven million dollar pulp mill.

Making up a train of log-loaded cars at central marshalling yard, for transportation to tidewater. Most of the logs shown are small hemlock and balsam, suitable either for pulp or, if properly kiln- or air-dried, for lumber.





A field of daffodils in Saanich, Vancouver Island

RESOURCES

The dense softwood forests on the moist windward slopes of the Coast Mountains comprise British Columbia's greatest natural resource. Here, from one of the largest commercial forests on the globe, thousands of husky loggers harvest a crop which yields one-half of Canada's yearly output of saw-

mill products. The coastal forest is made up as follows: hemlock 30%, red cedar 26%, Douglas fir 24%, balsam fir 11%, Sitka spruce 6%, yellow cedar 2% and white pine and cottonwood 1%. King of these conifers is the Douglas fir that towers to heights of between 150 and 225 feet and reaches diameters of from 3 to 6 feet. This has been

Orchards at Penticton at the southern end of Okanagan Lake

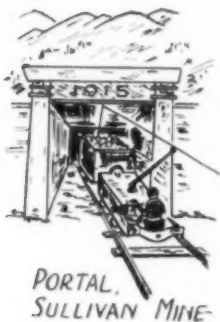
B.C. Travel Bureau photos



the most prized tree for the lumber market heretofore, but with the rapid depletion of the forests by fire, disease and logging, the lumber men are now turning to the smaller trees of other varieties.

The fisheries of the indented seaboard provide about fifty percent of the Dominion's fish catch to give British Columbia leadership as the chief fishing province. Both foreign and Canadian fishermen in these waters are affected by the regulations now in force to ensure the permanence of this resource.

From May to August the many inlets and mouths of the Fraser, Skeena, Nass and other rivers are dotted with small power boats from which the men catch salmon with gill nets, purse seines or trolling lines. First come runs of spring salmon, followed by sockeye and coho. The silver harvest of the sea is taken as the fish ascend the rivers to spawn. Halibut are caught in Dixon Entrance and Hecate Strait to be sent east in express refrigerator cars from Prince Rupert. Pilchards and herring frequent the shores of Vancouver Island. Southern inshore waters are reasonably well stocked with clams, crabs and oysters.



While minerals are widely distributed throughout the province, most of the mining activity is found in areas near the coast or in the southern part because of available transportation facilities. Gold, silver, copper, lead and zinc occur in the highly mineralized hills near Nelson, Kaslo, Slocan and Rossland. Silver-lead-zinc concentrate is sent from the famous Sullivan Mine at Kimberley to Trail where stands the largest metallurgical plant in the British Commonwealth. Copper is mined at Britannia Beach on Howe Sound and at Copper Mountain near Allenby.

The search for gold did more to open up the province than did the fur trade, for it brought 33,000 miners to the Fraser River bars in 1858 and thousands to Williams

Creek in the Cariboo two years later. Today's leading producers of this precious metal in British Columbia are the Pioneer and Bralorne mines in the Bridge River area, and Privateer mine at Zeballos on Vancouver Island's west coast. Other producers include Cariboo Gold Quartz, Island Mines, Sheep Creek, Polaris Taku and the Hedley Camp. Coal has been mined at Nanaimo since 1852 and more recently at Telkwa and in the Crowsnest field.

Only a very small part of this rugged province is suitable for agriculture, yet the many scattered valleys and uplands offer soils and climate that ensure a comfortable living to the practical farmer, horticulturist or dairyman. The marketing of products presents the main difficulty. Consequently most of the farms and ranches have been developed in southern and central British Columbia adjacent to highways and railroads.

The Fraser River Valley and southeastern Vancouver Island are well suited for growing vegetables and such small fruits as strawberries, raspberries, loganberries and blackberries. Three-quarters of the acreage devoted to these fruits are found around Chilliwack, Abbotsford, Haney and Mission where farmers receive help from the Dominion Experimental Farm at Agassiz. Refrigerator cars carry part of the crop to the Prairies. The rest is turned into preserves or shipped abroad in barrels of sulphur-dioxide to be used for jam-making purposes by the importing countries.

Impetus was given to bulb growing in the Fraser Valley, on the Saanich Peninsula, and to a lesser extent in other sections, when Holland's exports of bulbs were cut off by World War II. Today over 500 acres are devoted to growing narcissi, tulips, iris and gladioli compared with 160 acres in 1929. Daffodils and tulips are available in the coastal towns for but a few cents a dozen at a time when the Prairies and Eastern Canada are emerging from winter.

Extensive fruit orchards are to be seen where irrigation is practised in the valleys of the Okanagan and Kootenay regions. British Columbia is a leading province in practically

all types of tree fruit production. This is the only province growing apricots for commercial use. These, with peaches and cantaloupes, thrive in the warmer areas in the southern Okanagan, particularly around Penticton, Kelowna and Keremeos. The cooler parts yield apples and pears, Vernon and Nelson being well known for these. The entire crop of the Okanagan and Kootenay is marketed by a growers' marketing agency known as "Tree Fruits Limited".

The Okanagan-Kootenay produces about four-fifths of the commercial fruit crop of the province. Eight million boxes of apples were produced in 1944. One third of these were sent to Great Britain, the United States and parts of the British Empire; the remainder were sold on the provincial and other Canadian markets.

Dairy cattle are raised on the excellent pastures of the lower mainland and on southeastern Vancouver Island, where the mild climate permits winter grazing. Other dairying sections include the Okanagan-Kootenay and the Bulkley Valleys. Large herds of beef cattle are kept throughout the Interior Plateau and particularly in the Nicola-Princeton-Okanagan Valleys, in the Kamloops district, in the Cariboo-Lillooet region and in the East Kootenay-Columbia Valley.

Muskrat, marten, beaver, silver fox, mink, raccoon and weasel are among the chief fur bearing animals that yield pelts to the value of two million dollars a year. About half of this amount comes from the Prince George country in which the Hudson's Bay Company posts and trappers depend on supplies freighted down the Crooked and Parsnip Rivers. A large number of silver fox, mink and raccoon are now raised on farms close to Vancouver, Victoria and New Westminster.

British Columbia's developed water power resources are only surpassed by those of Quebec and Ontario. The Lower Fraser Valley is served by plants at Buntzen and Stave Falls. Southern Vancouver Island is supplied with electricity from Jordan River near Victoria and from Millstone at Nanaimo. Powell River, Link River at Ocean Falls,

Britannia Creek on Howe Sound and Big Falls near Prince Rupert are other coastal sources of hydro-electric energy. The Cariboo is served by Bridge River, Kamloops by the Barriere River, the southern interior by Bonnington Falls and the east Kootenay by falls on the Elk and Bull rivers. Great potentialities for the utilization of water power occur on the Fraser River, particularly at Lillooet, Moran, Soda Creek, Chilko-Taseko River and That'sa Lake.

INDUSTRIES

Her wealth of resources and her proximity to the sea have helped to make British Columbia the third province in industrial importance. Greatest producers of wealth are the scores of sawmills on the coast and in the interior. These turn out 45 percent of Canada's shingles and large quantities of sash, doors, lumber and plywood. Ravenous pulp mills at Woodfibre, Port Alice and Port Mellon utilize hemlock, balsam and spruce. Paper mills at Powell River, Ocean Falls, and Port Alberni roll out miles of paper every working hour.

The canning and curing of fish ranks next in value to the forestry industries. Between a million and a half and two million cases of salmon are canned at plants scattered along the sinuous coast. This represents six-tenths of the total for Canada. Pilchards are canned for food or pressed for oil. Herring are salted, smoked or ground into meal.

Slaughtering and packing houses at Vancouver and New Westminster receive cattle from the Cariboo-Chilcotin ranchlands. Other industries include the production of such commodities as butter, condensed milk, fertilizer, refined sugar, paints, rubber roofing, petroleum products, and bakery goods. The canning of fruit and the preparation of vegetables provide work for many residents of the Okanagan-Kootenay region, the Lower Fraser Valley and the Saanich Peninsula. Building and repairing ships gives employment to hundreds at Vancouver, North Vancouver, Esquimalt and Victoria.

Last, but by no means least, is the tourist industry that is worth about thirty million

dollars a year. This industry is rapidly expanding. The province is endowed with almost unlimited potentialities for the tourist trade, chief of which are an infinite variety of magnificent scenery, beautiful lakes and inlets teeming with fish, a wealth of game, and a salubrious climate in the lower coastal region where outdoor sports may be enjoyed the year round. Little wonder this western province enjoys an enviable reputation as the "Evergreen Playground" of Canada.

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Top to bottom:—

Pulp and paper mills at Ocean Falls, on an arm of Dean Channel

Cattle on the range, Williams Lake, Cariboo

Clearwater Lake, about 100 miles north of Kamloops

Skyline Trail, Manning Park, about 30 miles east of Hope

B.C. Travel Bureau photos



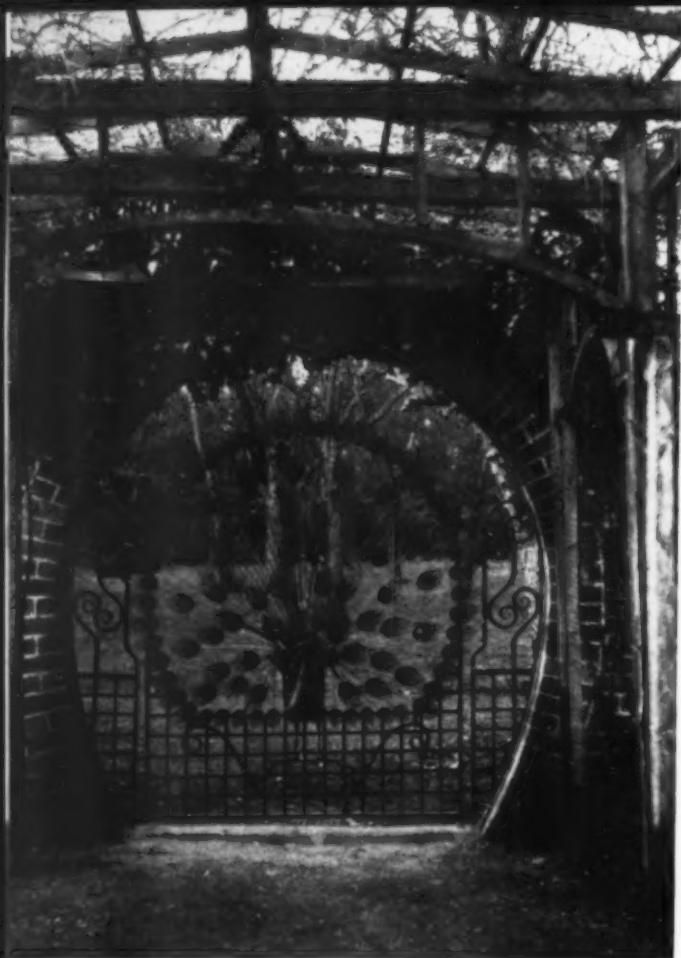


Looking northwest from Hotel Vancouver; Stanley Park in centre, West Vancouver and Hollyburn Mountain in background. See air photo page 22.

Photo by G. M. Dallyn

Right:—Tumbling Glacier, Mount Robson
C.N.R. photo





Gates and the Englishman

by MARTIN THORNHILL

The wrought-iron peacock gate at Harpsden Court, Henley-on-Thames

"**S**HOW ME THE ENTRANCE to an Englishman's home," a psychologist once said, "and I will tell you how he lives." A man's nationality is revealed by his language. In England you have a clue to his Alma Mater in his old school tie. And surprisingly, the seal is often set on his occupation by the character and originality of his own front gate. If it is not representative of his job, then it is of his hobby, his memories, his travels, or his home country from which, through circumstances, he has been exiled.

The smell of the sea to an old sailor is like the redolence of the tropics to an Anglo-Indian; but while the retired tropical campaigner generally has to quit his equatorial paradise, the ex-sailor can easily settle down within sight of his beloved sea. This he usually does, and he surrounds himself with reminders of his old craft. How he comes by them is none of our business, but

he often manages to come home with, among other relics, a ship's steering-wheel which he secures to his garden gate. Retired seafaring men are, in fact, specially fond of identifying their homes with their old calling, and you would find a good many charming cottages thus equipped at or near many seaside towns or villages if you looked for them. The best I've seen grace small houses at Cemaes Bay, Anglesey; Braunton, Devon; Pill Creek, St. Flock, near Truro; at the top of Brock Hill, Isle of Wight; and at Portishead, Somerset.

In the village of Kilmun, near the Holy Lock, above Dunoon, on the Firth of Clyde, unusually artistic patterns in seashells adorn some of the garden gates—designs that again betray the "old salt". The shells, which are large ones, are set in stucco, which adheres to the gate posts. Sometimes gates are arched in the manner of giant wishbones by massive jawbones or ribs

*Similar gate posts made by jawbones of a whale stand near Kentville, N.S. They were moved from what is still called "Jawbone Corner" a few miles away.

wrested from the huge mammals of the sea. In the whaling ports of northern Scotland these are fairly common, the ribs being one of the parts of the whale for which little use can be found since women gave up wearing "whalebone".

That there is more than guesswork in the psychologist's theory is shown again by farm gates such as those at Tring, Hertfordshire, and Moulton, Northants. Made, crossbars and all, in the likeness of pitchfork, sickle, shepherd's crook, scythe, spade, hoe, rake, and what not, these are masterpieces of their breed. And not only farmers are guilty of this innocuous form of engaging self-advertisement; you find humble garden-lovers equally blameworthy, each feature of their gates fashioned to represent some garden tool, even to the latch, which often looks suspiciously akin to a pruning knife. The idea belongs to the gardener, but the actual workmanship is generally the original effort of some village craftsman-blacksmith.

And you should not be surprised to find that blacksmith's own gate or door also following some fanciful trend. The old smithy at Penshurst, Kent, exaggerated this idea to perfection. The whole doorway surround was an enormous horseshoe, correct in every detail, even to the nail holes. Two others adorn the village forges at Claverdon, Warwickshire, and at Glynde, Sussex. A fourth, at Carlton-on-Trent, Nottinghamshire, has, like Penshurst, succumbed at last to the tempting demands of the more modern road user, and is now a garage. All the same, it seems none the less proud of its earlier associations, particularly the fee once drawn for shoeing Black Bess, famous mount of the storied highwayman, Dick Turpin.

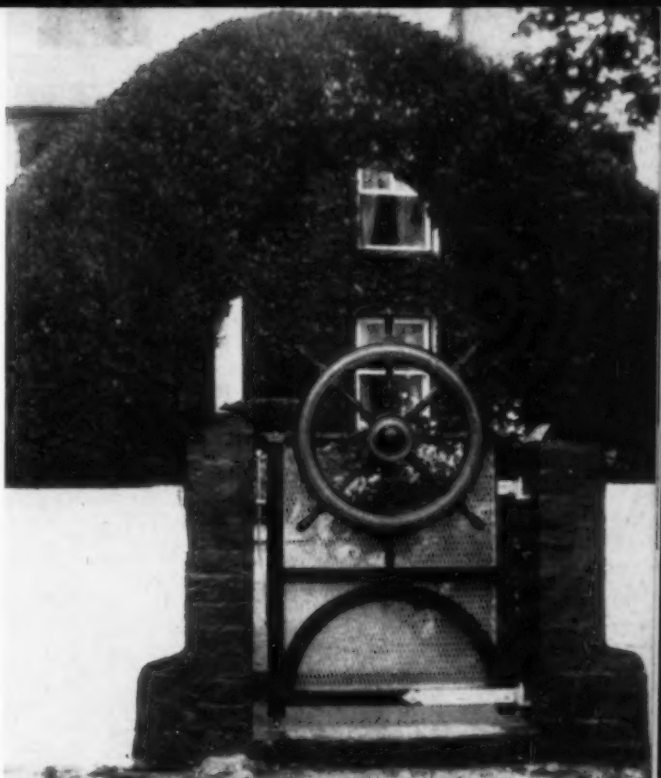
That was about the time that handmade pillow lace was a flourishing cottage industry in the counties of Bedford, Buckingham and Northampton. The industry infected the gate-making trade, and many gates were beautifully carved in oak to represent local lace designs. The most artistic of them all was said to be the one at Maidford, near Towcester, but I hear that this one has now rotted with age and been dismantled.

Top to bottom:—

The sailor's memento of his ship

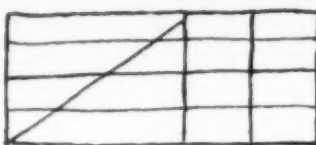
*Reminder of whaling days**

Farm implements incorporated in a gate at Tring

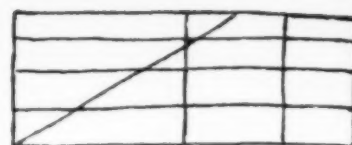




Hampshire



Wiltshire



Oxfordshire

In your search for gates that are strictly "occupational" you would find that others are often definitely "county." It is surprising how varied are the ways of arranging the bars and crossbars of a farmer's simple field gate. Indeed, with a little practice you could name without map or signpost almost any English county by the set of its field-gate bars. All have uniformity as to five horizontal bars, but nearly every county cherishes its own ideas when it comes to crossbars. Hampshire, for instance, sports two uprights and one diagonal. Wiltshire uses the same pattern, with uprights set more closely together. In Oxfordshire you find the same design except that the diagonal, instead of finishing at the top of an upright, cuts across one of them. Warwickshire prefers

two uprights at one end, the remaining space filled by two bars set X-shaped. Occasionally this county adds a short bar running downwards from the X's middle.

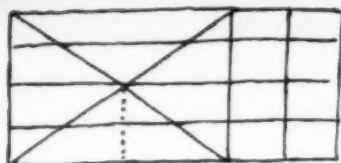
In the north—notably Yorkshire—the preference is for several (usually five or six) uprights crossed by a diagonal which extends to the length of the gate. Welsh counties run a remarkable collection of designs from a double V to patterns innocent of crossbars but having uprights at all sorts of drunken slants. Many a private house, too, puts up a field gate which is a faithful copy of a county design, thus giving a fairly certain clue to the home county of the owner.

Sussex has also the "tapsel," and you would find it nowhere else. Instead of swinging from an end post, the tapsel pivots on a central stake. Another individual type is the "tumble," or "clapper". It consists of four bars. Pressure on the top one makes the whole collapse. After passing through, the bars are restored to their closed position by the weights which hang at one end of each. I believe there are only two of these curious gates in the whole of Britain—one at Linton, Cambridgeshire, the other leading into the churchyard at Hungerford, Berkshire.

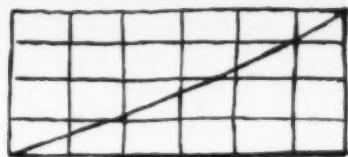
What surprises some overseas visitors is how soft is the spot in British hearts for certain familiar gates that lead to homes other than their own. When, to simplify some urgent road repairs, the beautiful wrought-iron gate was removed from the house Grim's Dyke, Harrow Weald, the townsfolk agitated so actively for its restoration that it was very soon back in its place—before the home of Lady Gilbert, widow of the beloved librettist in the Gilbert and Sullivan partnership. Wrought-iron gates such as this form a large host of equally cherished individual possessions—designs picturing the rising or setting sun, bunches of rare and coveted fruits, fine birds and strange fish, ancient sailing craft,



A Sussex tapsel gate operated on a central pivot



Warwickshire



Northern Yorkshire



Wales

besides a variety of other non-pictorial but none the less pleasing patterns.

Several perpetuate a memory, call to mind old haunts or travels, or portray a hobby in some original way. You find them often on large country estates. One of the finest, I think, is a peacock gate at Harpsden Court, Henley-on-Thames. This gate is fitted to a circular entrance through a wall, and the handsome bird, with outspread tail, almost fills the ivy-clad opening. The owner's obvious weakness for worked-iron gates was found on inquiry to have followed the gift by a globe-trotting son of a very fine specimen from a Spanish convent school. This one forms the attractive approach to an orchard elsewhere in the grounds.

When a pair of cart wheels has outgrown its orthodox function you may find it adorning the gate of the manor farm or some old farmhouse, as at Baddesley Clinton, Knowle, Warwickshire. There are others near Teignmouth at Shaldon, around Exeter, at Aberdare, and at Stickford, Lincolnshire. This last is made from the wheel of a gig, its owners obviously deriving much satisfaction from keeping the brass hub brightly burnished.

Few travellers through rural England can have missed seeing those abominations of

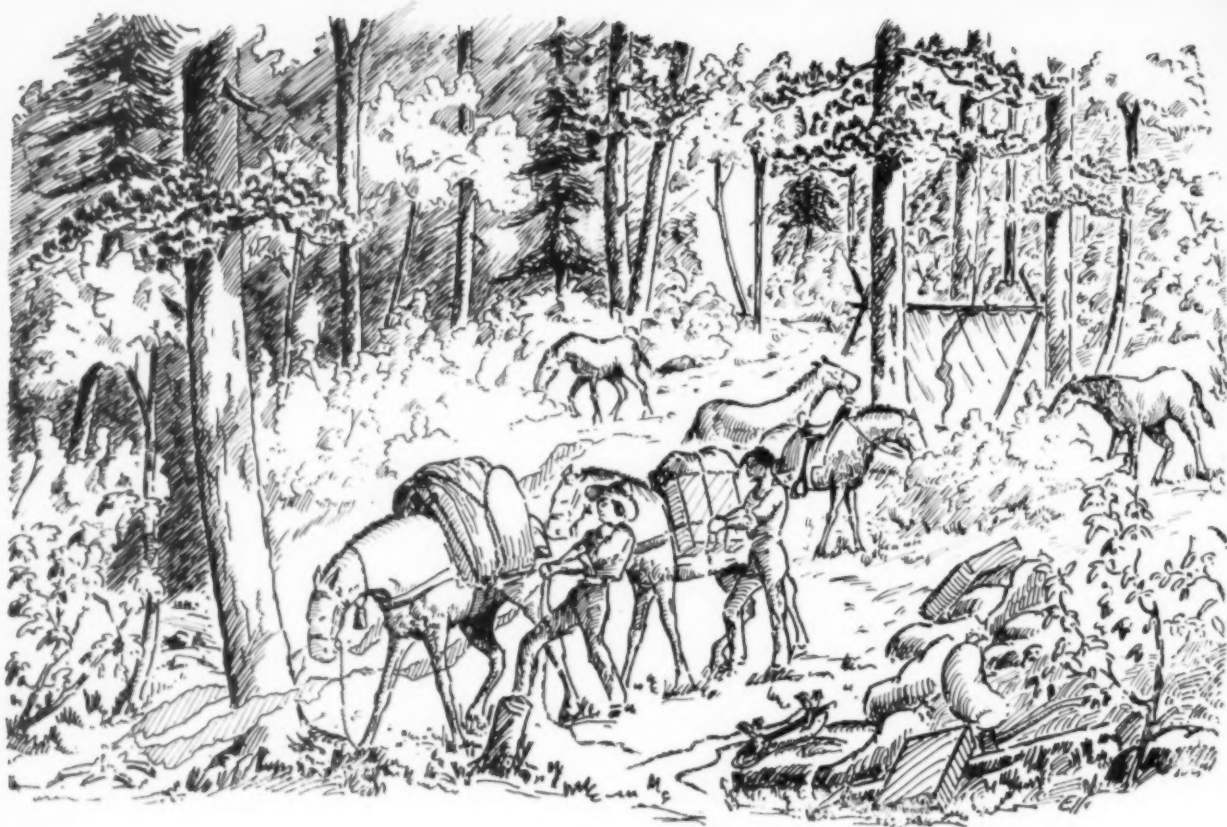
fences and gap-fillers that are nothing more or less than portions of discarded iron bedsteads. But surprisingly enough, these are sometimes applied quite artistically to motifs for garden gates. At Sicklehatch, Horam, Sussex, old salvage of this ilk has been used to make a most attractive gate, again the work of the village blacksmith. Near Salisbury is a farmer who has gated and fenced a whole field in a similar way, and the effect, oddly enough, is as pleasing as it is unusual.

It is not always the gate or door itself that arrests you. It may be something unusual around or about it. This is noticeable in some English church gates. You would think that the proper place for the remains of prehistoric monsters was the nearest museum. Instead, a church, in one instance, has appropriated them; above the church door at Mallwyd, Montgomeryshire, hang a large rib and a bone from some predatory monster which were dug up on the land adjoining. These are not strictly within our category, but a seeker of the macabre would find something to satisfy him at St. Stephen's Church, Coleman Street, London, where a preserved skull and crossbones form part of the entrance arch. Hickleton Church, Yorkshire, is about the best example of this eerie creed; set into the wall by the lych-gate are three human skulls, while below flaunts the none too comforting epitaph: "Today for me, to-morrow for thee."



How a tumble or clapper gate works. This one is at Hungerford, Berkshire.





Pack Horses

by S. C. ELLS

VERY EARLY historical records indicate that, in the Middle East and Far East prior to the evolution of the wheel, various animals were extensively used as beasts of burden. Thus, for example, the transportation of asphalt from Palestine and the Euphrates valley to Egypt for the embalming of mummies involved the use of thousands of camels on the many caravan routes.

Similarly, prior to the construction of roads in Eastern and Western Canada, horses played an important part in the transportation of relatively light package freight. In Eastern Canada such transportation has virtually ceased. In Western Canada, however—and more especially in those parts of British Columbia and Yukon Territory where, as yet, roads have not been

constructed—pack horses still climb rough mountain trails and ford swift mountain streams. Wherever possible, horses ‘rustle’ their own forage at night as best they can.

At best—and even when in charge of humane packers—the lot of the pack horses is not a happy one. During much of the summer they are tormented day and night by a variety of flies although at night and during periods of rest, smoke smudges afford some relief. Weight of individual loads carried varies from 200 to 225 pounds where trails are rough and precipitous, to a maximum of 250 pounds on ‘easy’ trails.

In securing packs various hitches are used such as the “diamond”, “double diamond” and “squaw”. The approximate appearance of the diamond hitch is seen on packs in the accompanying illustrations. Proper lashing

of loads requires experience, care and skill. Balancing of loads in order to ensure equal weight in both sides of the pack saddle, is essential to the—relative—comfort of the horses. In order to secure purchase when tightening up lashings and cinches, a packer commonly places one foot against the pack

Periods of travel and distances traversed vary widely and depend on the nature of the trail. On reasonably good trails a horse may carry 250 pounds a distance of fifteen miles in seven to eight hours. On difficult trails, weight of load and distance traversed is less. On the other hand, the writer has travelled with pack trains where heavily laden horses were driven from 7 a.m. to 5 p.m. without a stop, but fortunately such instances are rare. In general, pack horses, packer and packer's helper are hired by the day or are under contract rates per pound mile.

* * *

There are lonely trails a-climbing from
lonely northern plains,
And I hear the bells a-jangling as the bell-
mares lead their trains,
Up thro' the shadowy canyons to Alpine
uplands high,
Where the ptarmigan are nesting and the
big game wanders by;
There's creak of sweat-stained harness
below the snow browed scaur,
Where golden bench and river bar beckon
to valley floor,
For a new day is awaking to the song of
chattering drills
As stout hearts meet the challenge of lonely
mist clad hills;
And, ever straining up the trails where
dappled shadows lie,
The humble pack trains play their part in
Northland's destiny!

Top left:—Proper balancing and lashing of packs is essential to the—relative—comfort of horses and requires care and experience.

Right:—In many mountainous areas horses must pack up and down rough and often precipitous trails, and must ford swift flowing streams.





The Flight of the Thunder Bird

The first commercial flight into the Canadian northland

by FRANK H. ELLIS

TWO HAPPENINGS which occurred during 1920 were of deep significance in connection with the past and the future destinies of Canadian travel and commerce.

On May 2nd, the Hudson's Bay Company fittingly celebrated their two hundred and fiftieth anniversary of incorporation and trade in Canada—two hundred and fifty years of widespread activities which have so definitely helped to shape the destinies of our country. The major celebration of that event took place at Winnipeg.

Six months later, the roar of an aircraft engine was heard in the northland for the first time, when the first commercial aeroplane to penetrate the Canadian hinterland flew north from Winnipeg. This was the beginning of the great era of northern flying which has now surpassed all expectations.

From that small, epic start, flying has advanced to the point where tens of millions of air miles are logged yearly throughout the north country, over innumerable routes which now exist like an immense, invisible

net, spread to include every distant outpost in the Dominion.

During 1920 a company operating under the name of Canadian Aircraft, Ltd., was actively engaged in flying at Winnipeg, the capital city of Manitoba. On the 14th of October a gentleman entered the downtown office of the company, stating that he wished to charter a plane to fly him to his home town. The request seemed reasonable enough but the office staff were a bit staggered when they learned that he lived at The Pas, an outpost town hundreds of miles to the north, on the edge of the Manitoba wilderness. Flying equipment owned by the company consisted of machines with only wheel landing gear, and the last couple of hundred miles of terrain between Winnipeg and The Pas was a mass of uncharted bush, lakes and muskegs, then unknown to the eyes of airmen, and an uncertain proposition should a forced landing in a landplane be necessary.

Nevertheless a deal was made and, at a cost of \$475, the company promised to

Left:—Beginning of the first commercial flight into the northland. The Thunder Bird leaving St. Charles aerodrome, Winnipeg, on October 15, 1920.

Right:—Sunday spectators at St. Charles aerodrome, Winnipeg, twenty-seven years ago.



deliver the passenger home by air. The flight was undertaken at such brief notice that there was no time to make proper arrangements for re-fuelling and choice of suitable landing areas en route.

The two crew members who had been selected for the flight (of whom I was one) were early on the job at the company aerodrome at St. Charles, on the western outskirts of the city, and everything was in readiness for our passenger, Mr. Frank J. Stanley, when he arrived shortly before 11 a.m. on the 15th.

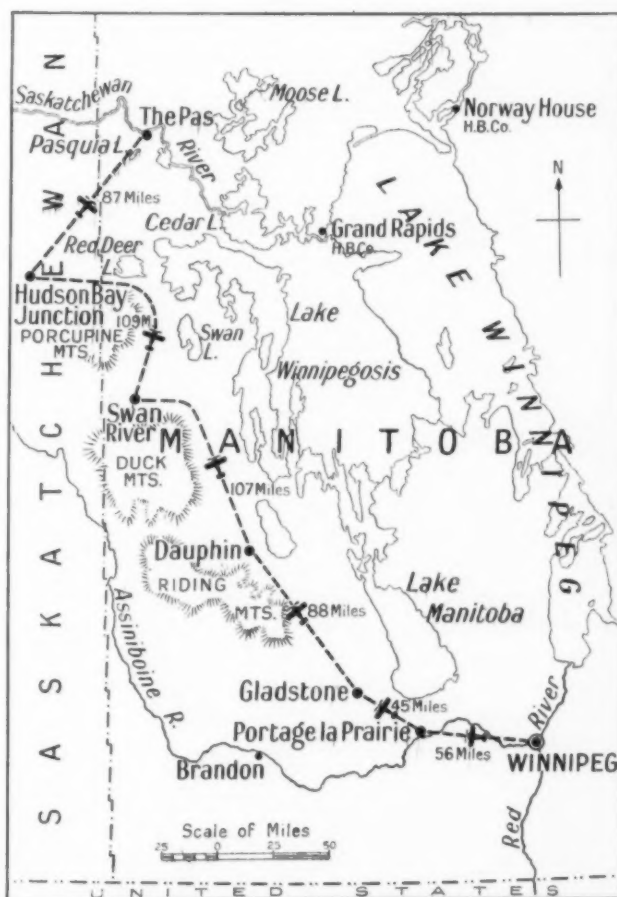
With what few maps we had been able to secure, Pilot Hector Dougall and I climbed into our seats, buckled our safety belts and, with a parting wave to those gathered around, set off. We were soon winging our way northwest at an altitude of three thousand feet.

The majority of the planes owned by Canadian Aircraft were 'Avro' biplanes, bought from the British government after World War I. They were sturdy, reliable craft, which had been converted from two- to three-seaters. The 110-horsepower Le-Rhone rotary engine with which each was equipped gave plenty of power. Our machine bore the registration letters G-CABV and she had served us well and faithfully on many an exhibition flight throughout the prairies during the preceding months.

Ideal weather prevailed and fifteen minutes out of Winnipeg we spied the smoke haze rising from the many chimneys of

Portage la Prairie. Another quarter-hour saw that town slipping by, far below our wings.

Following the same compass reading, we kept on our course, with the farming centre



The route of the Thunder Bird, October 15-16-17, 1920.



Crew members of the Thunder Bird: Pilot Hector Dougall, seated, and Frank Ellis, writer of this article. Inset is Mr. Frank J. Stanley, whose chartered flight was the first of its kind.

of Gladstone our next objective. Away to the north the vast stretch of Lake Manitoba vanished over the horizon's rim, and in the clear, sunlit air it presented an inspiring sight.

High over Gladstone, engine trouble developed from a faulty spark plug. The only cure being to fit a new one, down we went in a long, lazy glide, to a landing in a ploughed field, close to the town. We quickly remedied the trouble and once more rose into the wind. The town of Dauphin, our chosen landing place for the next stop, was some ninety air miles away.

Steadily we climbed, gaining altitude to swing around the eastern fringe of the Riding Mountains, and an hour and twenty minutes out of Gladstone, we set our wheels

down on the soil of a deeply ploughed field on the outskirts of Dauphin. All the ground near the town had recently received the ploughman's attention, but from experience we preferred a rough landing near an available gasoline supply to a smooth landing perhaps a mile or two from such a source.

Automobiles packed with people arrived at once and the three of us were quickly whisked to the nearest garage to make arrangements for necessary fuel.

By 3 p.m. after an appetizing lunch, with our machine re-fuelled, we bid adieu to the pleasant people of Dauphin, and climbing once again into the sky, we set off in a more northerly direction for the town of Swan River, where we planned to stay the night.

The Duck Mountains rising high to the west were not an invitation to safety, so we rounded them well to the east, swinging into a westerly course as the sun sank below the horizon.

Darkness comes early at that latitude in the fall, and night was already settling over the farmlands as we made a landing in a stubble field at 6.30 p.m. about a mile east of Swan River. Securely staking the machine, we set out afoot to complete our day's journey. Three hundred air miles had been logged, and accomplished with less effort than that final mile we trudged over a rough country road in the dark.

We registered at the local hotel for the night, and after a quick meal, went early to bed for much-needed sleep.

The outlook on awakening the following morning was bad, for the weather had changed completely. Ominous clouds were scudding fast from the north, the ceiling was low, and visibility poor. The temperature had dropped alarmingly, and the chill breath of winter was in the air. Rain squalls followed one after the other throughout the morning, and we despaired of leaving that day. By 2.30 in the afternoon, however, the weather cleared a bit, and we decided at

THE FLIGHT OF THE THUNDER BIRD

once to try to get through. Having fuelled the aircraft earlier in the day we were ready for a quick departure if opportunity offered.

Our intentions on leaving Winnipeg had been to make a direct flight from Swan River to The Pas, in a straight air line across the wilderness area between those two points, but with weather as it was, such a plan was out of the question. We decided therefore to set a course westward to the small village of Hudson Bay Junction, and there to land or carry on as conditions indicated.

There were no spectators in the stubble field to see us off as we left Swan River, bucking into a boisterous wind, with a hundred and nine miles of bad weather and difficult country between us and the Junction.

Our route carried us over the eastern fringe of the Porcupine Mountains, where the air was extremely rough and visibility bad. Before we had been in the air fifteen minutes we plunged into a driving snow squall and were flying blind. We managed to keep to our course, but several times we were obliged to alter our compass direction to avoid dense snow flurries, and we were then forced to fly close to the tree tops to keep in visual contact with the ground.

During this hop we observed several large flights of Canada Geese, winging

sturdily southward before the wind in grand formations. Usually geese fly high during migratory flights, but those we encountered that day were holding to a low altitude, just below the cloud layers, probably waiting to outfly the storm before rising to greater heights. It was a wonderful sight, when seen from the air, but not very encouraging to us. Their passing meant but one thing, that the grip of winter was already binding the lakes and the streams in the high north, and it would be a matter of days only before the icy touch reached our vicinity.

We had a wild ride that Saturday afternoon, and after ninety minutes of buffeted anxiety we were relieved to sight the Junction, being lucky to do so in such heavy weather.

Our joy was short lived. In ever widening circles we swung around the settlement in search of anything resembling a landing place, only to realize that such a spot did not exist!

There were no areas under cultivation, and spreading for miles in all directions was virgin bush and muskeg. There we were—up aloft with a diminishing fuel supply, the weather foul, and a heavy head wind to buck if we attempted to reach The Pas. We knew we had to land somewhere near.

With little choice in the matter, we picked out the muskeg nearest the village, and

The Manitoba farming centre of Swan River, first stop-over point on the flight from Winnipeg to The Pas.





The Thunder Bird, officially G-CABV, at The Pas, after her successful pioneer flight from Winnipeg.

swinging into the wind, we put the Avro's nose down and prepared for the worst. The gale now became a blessing, cutting our landing speed down to about thirty miles an hour as our wheels sank into the coarse grass and the mud. At that season of the year, the northern muskegs are at their driest but landing was a gamble.

The wheels sank into the muck axle deep, and the machine was wrenched to a stop with a sickening jerk. The sturdy ash skid of the undercarriage was all that lay between us and disaster. It took the full strain as the tail of the machine went up, and the nose down, but it withstood the shock, and we settled back to an even keel, from what might well have been an end to our flight.

The entire population of the village, about fifty all told, had observed our arrival with interest, and were quickly on the spot. Excitement ran high for a plane had never been seen before in those parts.

It was four in the afternoon when we landed, and with about two hours of daylight left, we set about extricating our craft from the muskeg. The entire man-power of the village was quickly offered and with many axes, which appeared like magic, our helpers began clearing a path through the bush to nearby rising ground, where it appeared possible to clear a suitable stretch for a take-off.

By the time it was dark the machine had been hauled to the partly prepared runway. We then became the guests of the villagers, who entertained us far into the night.

Rising early, the self-appointed helpers worked all Sunday morning on the clearing, and by afternoon a fairly smooth but very short stretch was ready.

Once again the weather smiled upon us, the wind had veered to the south, and the sun showed through scattered clouds.

If you have ever had the experience of having had your car run out of gas on a highway, and walked back several miles to the nearest garage, only to find it closed, you will be able to understand our feelings when our request for fuel brought the reply, "Gas? Why there isn't any here!" We learned to our dismay that the village had no road connections, and therefore boasted no cars—and no gasoline. The local laundry and café owner heard of our plight, and with true Chinese hospitality offered us his entire supply of high grade gasoline, which he had on hand for illuminating purposes. There were two four-gallon cans, full to the brim; we almost hugged him.

By 3.30 p.m. we were ready to leave, so bidding good-bye to some of the kindest people one could wish to meet, we started up the engine and climbed into our seats. With prospects none too certain for a

THE FLIGHT OF THE THUNDER BIRD

successful departure we fastened our safety belts with due precaution.

A number of the huskiest men held the machine back until our engine was going full out. At the "Let go" signal, our craft surged forward, and quickly picked up speed. The runway was almost too short; as we took the air our wheels slashed through the underbush beyond the cleared area; a steep climbing turn carried us away from a large stand of trees, with but inches to spare. Only the skilful handling of the controls by Dougall got us clear.

As we hastily gained altitude we circled the village to wave a last farewell to our friends, whose upturned faces and waving arms carried to us the knowledge that they were happy at our successful escape from a difficult situation.

At three thousand feet we levelled off, heading northeast, and for the first time since leaving Swan River we were able to enjoy the view of the great expanse below us. Visibility was perfect, and man's first sight of the northland from an aeroplane was an unforgettable experience.

Clear to the horizon in all directions lay a jumbled mass of land and water, to all appearances the brown, green and blue pieces of an immense jigsaw puzzle. Low in the sky, the sun spread a glittering reflection on a myriad of lakes to westward, and once,

far below, we saw the faint V cut by the bow of a tiny canoe, as its owner slowly paddled across the surface of an unnamed lake.

A strong tail wind helped us along, and the eighty-seven miles between the Junction and The Pas slipped under our wings in forty-two minutes.

The Pas townsfolk had received word of our coming by telegraph, and all day Saturday and Sunday they had waited for us to arrive. After circling the town, we chose a landing site behind The Pas Lumber Company's yard, and at 4.30 p.m. we settled to a safe landing, although the cattle and stumps which besprinkled the field gave us a few anxious moments before our machine finally came to a stop.

Mayor Stitt and his Councillors were quickly on hand to extend their official welcome and to congratulate Mr. Frank Stanley on his initiative in becoming the first aerial passenger to fly into the northland; a banquet in honour of the event was held the following day.

Great interest was shown by the populace, few of whom had ever seen an aeroplane. During our stay, Indians came from miles around to view the machine, but few of them would approach closely.

One elderly Cree, overcome by curiosity, examined the machine very minutely. His

Aerial view from the Thunder Bird, showing the business section of The Pas, northern Manitoba trading post, in 1920.



puzzled expression prompted me to ask him what it was that worried him, and he replied in quite good English, "How Thunder Bird stay up in sky?" His choice of name for the machine seemed most appropriate and, with some ceremony, she was christened accordingly. Thus the first commercial passenger plane to penetrate north of 53 degrees in Canada came by her honoured name.

So flying came to the northern hinterland, starting the first faint echoes of an aircraft's engine in that whole vast area. Few of us then realized that those echoes would swell to such tremendous proportions that they would become a familiar daily sound throughout the entire territory, from the Atlantic to the Pacific, and northward far beyond the Arctic rim.

Although staunch G-CABV has long since passed into that mysterious oblivion which engulfs aged elephants and aircraft, her memory should always linger in the

history of Canada's hinterland. She bestowed a great blessing on a land of isolation—she gave wings to the northland.

* * *

Note: The legend of the Thunder Bird is widespread among the Indian tribes of Canada, whose lore tells them it is a mighty bird of immense wingspread. Flying at tremendous heights, it is rarely seen by the human eye as it wings past overhead, but the flashing of its eyes causes the lightning, and the rumbling of the thunder is the sound of its great pinions echoing back from the very sky itself.

The week following our arrival at the outpost, we carried many passengers aloft on short sightseeing hops, and the first to have the experience was Miss Ruth Taylor, the first of her sex to view the north country from the air. Fittingly enough the second passenger was a Hudson's Bay man, Mr. McKay, the factor from the Company post at Grand Rapids.

Our company had intended to have the plane flown back to base at Winnipeg, but wintry conditions set in, and the plan had to be changed. The machine was therefore dismantled, and was shipped back to Winnipeg by ground transportation, bringing the whole affair to a successful conclusion.

The first photograph taken from the air in the Canadian north, showing the mass of jumbled lakes and muskegs a few miles south of The Pas. Photo taken by the author on the afternoon of October 17, 1920, from a height of 3,000 feet, during the Thunder Bird's hop from Hudson Bay Junction to The Pas.





Canadian Geographical Journals Presented to Allied Countries

IN THE EARLY SUMMER of 1946 the Board of Directors of The Canadian Geographical Society decided to express their sympathy and good will towards the war-devastated Allied countries by sending to each a complete set of the Canadian Geographical Journal. Institutions of learning had been disrupted, in many cases libraries had been destroyed and contact with the Western Hemisphere was confined to matters of military expediency. It was felt that the Journals might perform a useful service; not only would the early numbers (back to 1930) be available for reference, but the issues from 1939 to 1946 would cover a period when publications of like nature were suspended in many countries. Diplomatic representatives in Ottawa of the various

countries were asked to suggest the library in their country where the Journals could be placed with the most widespread benefit.

Arrangements were then made with the Department of External Affairs for Canadian diplomatic representatives abroad, all of whom were Fellows of the C.G.S., to present the sets of Journals to the designated libraries. With the most helpful co-operation of the Department difficulties of transport were overcome and the volumes were formally presented on behalf of the Society.

A set was placed in the library of the British Museum. Another set went to the University of Caen, the French town so poignantly associated with the action of Canadian troops overseas. At the request of the French Ambassador a set was also



*Main building of the
Academy of Sciences
of the U.S.S.R.*

placed in the University of Paris. Holland was the site of much Canadian action in the liberation of Europe and the University Library of Amsterdam has expressed keen appreciation of the gift of the Journals. The ravaged city of Warsaw, struggling for rebirth, was the recipient of a set, for which the Polish people are most grateful.

The Director of the Geographical Institute of the Academy of Sciences of the U.S.S.R. states: "The Institute and I, personally, were very pleased to receive from The Canadian Geographical Society the full set of the Canadian Geographical Journal. This magazine helps me and my employees to make a closer acquaintance with the work of the Canadian geographers and with Canadian geography." Other countries in Europe to which sets were sent were Belgium, Czechoslovakia and Greece, but shipping delays have retarded their receipt.

In accepting the set in Copenhagen, the head of the library wished to convey to the Society "the sincere thanks of the Royal Library of Denmark, not only for the set of Journals itself, but for the kind thoughts which prompted the executive of the Society to turn their eyes in the direction of Copenhagen, a gesture which would be appreciated by every Dane".

The longest-suffering country in the war—China—also received a set of Journals and at a ceremony conducted by the Chinese Minister of Education the presentation was made to the China Institute of Geography in Nanking. Deep appreciation has been expressed by the Director of the Institute, who informs us that a special, inscribed case is to be made in which to keep the Journals.

It has been a great pleasure to the Direc-

tors and Members of The Canadian Geographical Society to be able to render this small service to our Allies. In order that all our members may be aware of the feeling of friendship evoked, the remarks of Dr. N. Munthe of the National Library of Norway, are quoted. This is what he said on receiving the gift from the Canadian Minister to Norway, Mr. J. D. Kearney:

"On behalf of the University Library of Oslo, which is at the same time the National Library of Norway, I thank Your Excellency respectfully for the kind words that accompanied the gift from The Canadian Geographical Society. The circumstance that you have undertaken personally to hand over and present the volumes of The Canadian Geographical Society to this library may allow us to see the event under a broader scope: As a wish from scientific and learned Canadian institutions to establish closer contacts between the Dominion of Canada and this country. And this wish we on our side of the Atlantic Ocean reciprocate most heartily.

From a geographical point of view Canada and Norway have much in common. Indeed one could safely say that Norway is a sort of Canada *en miniature* or that Canada is a Norway enlarged to immense proportions.

In both countries we find the heavy end of the country in the southeast. We may liken the Oslofjord to the St. Lawrence—*si licet parva comparere magnis*. Here we find highly developed industry and agriculture. Then there is the same belt of large forests, and far in the west we have the high ranges of mountains running south to north. We have the same deep and sinuous fjords penetrating far into the coastal mountains. We

JOURNALS PRESENTED TO ALLIED COUNTRIES

have innumerable skerries and islands off the coast, as a breakwater against the ocean.

And turning northwards we find the same waste territories where the vegetation at last must succumb in the unequal strife against the frost and storms from the Arctic regions, and where a scarce but hardy population maintain an infinite struggle for human existence against the gigantic powers of nature.

No wonder that many of our countrymen who did not find sufficient space for their initiative in this country have chosen Canada for their land of option. We find Norwegians scattered all over the middle and western parts as farmers, foresters, fishermen and sailors. In many places they have formed settlements of their own with Norwegian schools, churches, newspapers and social gatherings. From my own encounter with them I have the impression that they have acclimatized very happily, and I hope they have proved to be good and faithful citizens to their new country.

During the last terrible war, when Canadians were fighting so bravely all over the world, many Norwegians found their place in the front lines and behind them. And we shall never forget the friendly welcome

Canada gave the Norwegian Air Force when they settled down in 'Little Norway'.

When Your Excellency comes today and presents this library with one of the best means to study your country, the publications of The Canadian Geographical Society, you may be convinced that we appreciate the gift. I am sure that the Journal will be studied with deep interest. We shall of course read what your countrymen have to tell about Norway, but we shall be eager to study the articles about your own country, the first hand material bearing upon the natural and social conditions of the Dominion of Canada. A special interest we shall also have in the achievements of the Canadian explorations in the Arctic regions, where our countrymen—Otto Sverdrup, Roald Amundsen and many less known—have contributed their share.

I ask Your Excellency to convey to The Canadian Geographical Society our sincerest thanks and gratitude. The Journal will be bound and a special book plate in each volume will tell every reader that it is a donation from The Canadian Geographical Society. And if Your Excellency should come to this library, with or without gifts from your country, you shall always find our doors open." M.B.

The Canadian Minister, Mr. J. D. Kearney, presenting the set of Canadian Geographical Journals to the National Library of Norway in the University of Oslo, November 1946.



EDITOR'S NOTE-BOOK

In "British Columbia" John Gough gives our readers the benefit of nearly four decades' study of his native province. He was educated in Victoria and attended the University of British Columbia, afterwards taking his M.A. at the University of Washington. Teaching and writing have occupied his time; he taught for some years in elementary and high schools and was for twelve years Instructor in Geography and Art at the Provincial Normal School in Victoria. Mr. Gough is now Municipal Inspector of Schools in the Greater Victoria school district. He is the author of two books which are authorized texts for use in B.C. public schools, namely *New World Horizons* dealing with North and South America, and *Old World Horizons* covering the other continents.

* * *

Martin Thornhill had no sooner completed his education in England than he succumbed to wanderlust which took him to many different parts of the world in a variety of capacities. The outbreak of World War I lured him from a mixed career of cowpunching, logging and mining in Colorado, Arizona, Wyoming and New Mexico, to Winnipeg, whence he went overseas with the 78th Winnipeg Grenadiers. Returning wounded, he carried out a war lecture tour in the United States before returning to the front. Later he joined the Indian Army, which he left to continue his travels in Africa, the Middle East and again in North America. Since returning to England he has, with a break for service in World War II, devoted himself to writing.

* * *

After an active flying career, Frank H. Ellis settled down to amass all the data available on the history of aviation in Canada. Much of his information is first-hand, since his flying experience goes back to the days of the "Early Birds", an organization of pioneer flyers of which Mr. Ellis was a member. Mr. Ellis came to Canada in his teens and lived for a time in Calgary. His first association with aviation was to work on building a plane and then to teach himself

to fly. After service in World War I he entered commercial aviation in Canada. Mr. Ellis now lives in West Vancouver and has spent many years on patient research into all aspects of early flying, on which subject he has written many articles.

* * *

COVER SUBJECT:—Mirrored in the lake, distant clouds and a section of the eastern slope of the Rocky Mountains flash their beauty to strolling guests from nearby Jasper Lodge. Scenes such as this in manifold variety characterize this region of snow-capped mountain peaks, rushing glacial streams, and forest-clad slopes and valleys. The Athabaska River cuts through the southeast-northwest mountain ranges from the south to the northeast corner of the park, and travels its scenic course, gathering as it goes the waters of many tributary rivers and streams and lakes of which Lac Beauvert is but one. Close-up glimpses of the valley are revealed to travellers by road and rail, as modern transport follows the route of the pioneer Athabaska Trail. Just west of the park and over the Continental Divide in British Columbia is world-famed Mount Robson, referred to in text and photographs in this issue under the title "British Columbia".

From kodachrome by G. M. Dallyn

* * *

AMONGST THE NEW BOOKS

Operation Neptune

by COMMANDER KENNETH EDWARDS, R.N.

(Collins, Toronto, \$4.00)

AFTER the two and a half years that have elapsed since D-Day, it is difficult to remember the hopes and fears with which the peoples of the allied nations looked toward the invasion of the "Citadel of Europe". The success of that operation, the greatest in the long history of warfare, has made us forget the doubtful issue of invading a fortified coast, guarded by an alert and aggressive enemy, and the building up of armies and stores of equipment sufficient to defeat him in the field. "Operation Neptune" deals with the naval phase of the invasion; the staff work and planning involved, not only in the military functions of the navy, but for the even more complex problem of landing stores and troops on an open coastline from something like two hundred ships a day. The landing operations in the Mediterranean, themselves no mean feat of warfare, were only an introduction to what must be considered the most

complicated military operation ever conceived by the mind of man.

The book covers the planning and staff work of the operation, its execution, and the invaluable work of the navy in reducing the coastal fortifications, the building of the Mulberry Harbours, the pipe lines across the channel and related naval activities up to the time of the opening of the Schelde. Commander Edwards is not an inspired writer, but makes a competent job of the subject which could only be handled by one who is familiar with naval staff work and operations. Like most books by service personnel (British), it is a masterly example of understatement, leaving the reader to visualize the strains and stresses of those fateful days and the dreadful responsibilities of those who directed the operations.

Illustrated with official photographs and with an index and useful end maps. Highly recommended.

P.E.P.

* * *

America 1355-1364

by HJALMAR R. HOLAND

(Collins, Toronto, \$4.50)

MR. HOLAND, whose earlier book *Westward from Vinland* was reviewed in these columns some years ago, is an American of Scandinavian descent who has devoted much of his life to research into the Norse settlements in America in mediaeval times. His first book was devoted largely to the "Kensington Stone", a stone inscribed in Runic characters unearthed in Minnesota, and to various artifacts, apparently similar to those used by Norsemen in the middle ages which have been found from time to time in the same locality. In the present volume, he turns his attention to the curious stone tower at Newport, R.I., which antedates the English settlement of that colony. Mr. Holand makes a very strong case for his claims that this building was a church built by a Norse expedition which was sent out to round up some of the Greenland settlers who were reported to the king of that day as having abjured both his sovereignty and their religion.

The latter part of the book is a not too successful attempt to connect the Norsemen in Rhode Island with those in Minnesota.

Mr. Holand suggests that a detachment of this expedition followed north along the coast to Hudson Bay and the mouth of the Nelson River and thence up that stream to Minnesota. It would, of course, have been much easier for them to reach the Nelson direct from Greenland. The inscription on the "Kensington Stone" states that ten members of the expedition were left with the ship fourteen days' journey away. It is about 800 air miles from Minnesota to the mouth of the Nelson and probably half as far again by water. It is hard to believe that even supercharged Vikings could force a boat at the rate of 70 or 80 miles a day, and up stream at that. Probably Mr. Holand had better look to Lake Superior rather than Hudson Bay for the "ten of (our party) by the sea to look after our ships fourteen days' journey from this island".

Mr. Holand is greatly impressed with what he calls "mooring stones"; rocks beside Minnesota lakes with holes drilled in them allegedly for the purpose of mooring the Viking boats. It appears that this type of mooring is common in Norway, but it is hard to believe that voyageurs in a strange and hostile country would go to that trouble for an overnight camp, or select steep hillsides where such stones are usually found, for camp sites. A handy tree or a hitch around a boulder seems a more probable mooring and his insistence on the validity of these stones as records does not appear to strengthen his case.

The critical reader may wonder at the number and variety of Norse relics that have survived and been found after a lapse of 600 years from an expedition reputed to number only 32 men.

P.E.P.

* * *

Canada and Her Northern Neighbours

by FRANCES CARPENTER

(American Book Co., New York, \$1.40)

THIS LITTLE book on Canada from the United States is
(Continued on page VIII)

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(Continued from page VII)

one of the best to appear recently. Prepared for elementary school level, it provides a good general picture of the geography of Canada and its influence upon human activities. It is a well-organized book, containing excellent maps of each province, condensed facts at the end of each chapter, and useful graphs of production in the appendix.

It is regrettable that such a book contains numerous factual errors, this reviewer having noted over fifty on the first reading, among others, such things as references to "the thriving saw-mill industry among the Eskimo"—in a land devoid of trees; and a large pulp and paper industry incorrectly located at Grand Falls, Labrador—instead of Newfoundland. In spite of this, it is believed that this book is worthy of study by school children, provided that teachers correct the obvious errors. The author is to be commended for assembling so much information on Canada and presenting it in such a readable manner. J. L. R.

* * *

New Guinea Headhunt
by CAROLINE MYTINGER
(Macmillan, Toronto, \$4.00)

IT IS DIFFICULT to escape the conclusion that the author of this interesting book has not made the most of her opportunities. One feels that it could have been made even more interesting, more sympathetic, and more valuable. She is so self-consciously an American that she finds it difficult to refer to "Britishers" or their ways of doing things without a gibe, yet in the very forefront she admits freely that her somewhat ill-financed expedition owes very much to their unfailing hospitality and unstinted assistance.

Her ostensible purpose in visiting New Guinea was to paint portraits of aboriginal types, a piece of work in physical anthropology for which there is great need and the value of which is undeniable. Yet in this book we have no list of illustrations, and the few sample portraits have no titles on them. The only way of identifying them is by reading the text, sifting out the bits of pertinent detail from the humorously exaggerated accounts of her bodily discomforts while painting, with the result that the efforts of the author are almost completely stultified.

The paintings themselves, though reproduced only in black and white, are obviously good; I should very much like to see the originals in their full colour and actual size, for here is sympathetic treatment indeed and a very special skill. DOUGLAS LEECHMAN

* * *

Igloo for the Night
by MRS. TOM MANNING
(University of Toronto Press—Saunders, Toronto, \$3.00)

SURELY this must be the coldest of all honeymoons on record!

Married at Cape Dorset in the eastern Canadian sub-Arctic in July, 1938, Mr. and Mrs. Manning spent the next two and a half years travelling on the almost

unknown west coast of Baffin Island, round the shores of Foxe Basin, thence down to Churchill and "outside". For much of the time they were alone, for they found that they got along better without natives than with them, travelled more quickly, used up less provisions, and were much more independent in their movements.

Jack Manning (and "Jack" is Mrs. Tom) writes with a wholesome lack of sentimentality. She tells of things as they actually were, as she saw them, as they both experienced them, with no exaggeration of either the plus or the minus side of life on one's own in a barren and desolate region.

The white women who have done what she has done are very few indeed. The Mannings, when travelling in winter, had to build an "igloo for the night", each time they stopped to camp, each time they were storm bound, each time they had to do an astronomical fix. What a puzzle these "fixes" are going to be for a lay reader. The meaning of the expression is so obvious to the author that she hardly bothers to explain that a fix is an astronomical determination of latitude and longitude by careful observation of the position of certain stars and the comparison of local time with Greenwich time by radio.

Tom Manning has a reputation for being a "hard traveller", even the Eskimos agree with that, but Jack kept up with him, greenhorn though she was. She quickly learnt all the genteel accomplishments of the North, such as cooking, needlework, painting and music: cooking bannock, seal, and caribou; needlework with sinew thread and skin clothing; painting the hull of their boat *The Polecat*; and music was forthcoming in heart-warming volume whenever she fed the dogs with fish or half-rotten meat; she even mastered the *koodlee*, the Eskimo soapstone lamp which burns seal-oil with a wick of dried moss.

In this book you will find no desperate perils, no thrilling adventures. The Mannings know their business too well for that. Mishaps, minor accidents, yes, of course; but nothing approaching disaster. That would be an indication of bad planning, lack of foresight and management. It is simply a factual account of their trip, with no great stress on the scientific accomplishments. That, Jack would argue, is Tom's end of it, not hers.

The constant yearning for the little amenities of civilized life, the gluttony with which they attack a new supply of reading matter and, above all perhaps, their constant thought and affection for their dogs, all ring very true to life. Never were the dogs out of their minds and every lost, blind, or hungry dog seemed to gravitate to them as if by instinct. We meet the dogs early in the book, get to know them by name, and see the last of them only on the final page, and then with regret.

It is a pity that the reader's pleasure in so readable a book should be marred, as it inevitably must, by the poor typography. In the copy at my elbow the inking is uneven and smudgy, the cuts are sad, flat and murky, lacking in detail and interest. DOUGLAS LEECHMAN